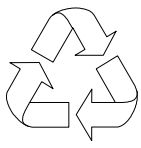
Aspire AM5610-AM3610

Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information, please refer to http://csd.acer.com.tw



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System Specifications

Overview

Size

- Max. 244 mm x 244 mm, MicroATX

Processor

- Socket type: Intel® socket T LGA775 pin
- Socket quantity: one
- Processor type: Intel® Celeron/ Celeron D/ Pentium 4/ Pentium D/ Core 2 Duo/ Core 2 Extreme/ Quad Core, core speed 533/ 800/ 1066 MHz

System Chipset

- North bridge: ATI RS600
- South bridge: ATI SB600
- Super I/O: ITE8718

Memory

- Four DDR2 sockets
- DDR2 400/ 533/ 667/ 800 SDRAM support
- 256MB/ 512MB/ 1GB/ 2GB DDR2 DIMMs support
- Up to 8GB system memory support
- Dual channel function enabled when plugging in two same memory size DDR2 memory modules

Onboard Graphics Solution

- ATI RS600 on-die graphic solution (ATI Radeon® X700-based graphic core)
  - ATI AVIVO technology support
  - Multiple display features support
  - One D-Sub VGA port on the rear side
  - One HDMI port on the rear side (A14)
  - SDVO interface which supports hot plug detection

HDMI

- With HDCP solution
- Meets HDMI 1.2a specification

PCI Express/PCI Slots

- One PCI Express x16 slot
- One PCI Express x1 slot
- Two PCI slots

Floppy Disk Drive

- One slot, 1.44MB/3 mode 3.5” devices support

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SATA Interface

- Four slots
- Compliant to SATA 2.0 specification
- IDE/ AHCI mode support
- HDD/ CD-ROM/ CD-RW/ DVD-ROM/ DVD-RW/ DVD+RW/ DVD Dual/ DVD Super Multi Plus support

Audio

- Realtek HD audio codec ALC888 HD codec 7.1 channels
- Six audio jack on the rear side of the unit, compliant to Realtek HD audio definition
- One 2*5 front audio header
- One S/PDIF-out header (1*4)
- One AUX-In header
- S/N ratio: 90 dB for the rear output jack

LAN

- Marvell 88E8056 PCI-E Gigabit Ethernet controller

USB

- Five OHCI and one EHCI host controllers to support ten ports
- Three 2*5 onboard headers
  - Four ports for front daughter board
  - Two ports for internal USB card reader + IR module
- Compliant to standard Intel FPIO pin definition
- USB 2.0/1.1 support

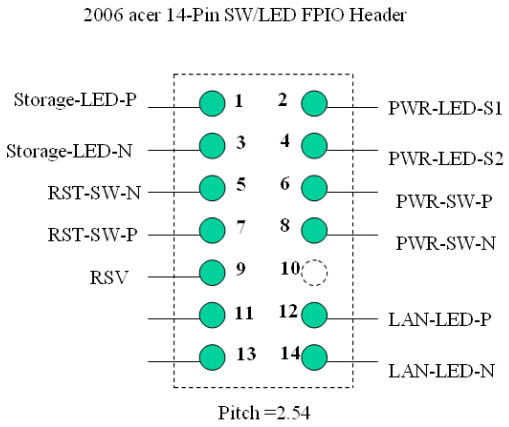
1394a

- Ti TSB43AB23PDTG4 controller
- One 2*5 onboard header
- One 6-pin 1394 port on the rear side of the unit

Buzzer

- One onboard buzzer

Front Panel I/O Header



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CIR & IR Blaster

- Compliant to ITE's pin definition to support CIR & IR blaster function for Vista home premium SKU
- Power-up feature support

Onboard Connectors

- Rear I/O connectors:
  - One PS/2 keyboard port
  - One PS/2 mouse port
  - One parallel port
  - One D-sub VGA port
  - One HDMI port (if equipped with RS600L A14)
  - One RJ-45 LAN port
  - Four USB ports
  - 7.1 channels phone jack (six audio jacks with MIC-in and Line-in definition)
  - One 1394 port
- Onboard connectors:
  - One CPU socket
  - Four DDR2 memory sockets
  - One PCI Express x16 slot
  - One PCI Express x1 slot
  - Two PCI slots
  - One FDD slot
  - One PATA slot
  - Four SATAII IDE connectors
  - Three 2*5 pin USB headers, compliant to Intel FPIO standard specification
  - One 2*5 pin front audio header, compliant to Intel FPIO standard specification
  - One 2*5 pin serial port connector
  - One 1*4 pin AUX-In connector
  - One 4-pin CPU fan connector
  - One 3-pin system fan connector with linear circuit
  - One 24-pin + 4-pin ATX interface PS3/PS2 SPS connector
  - One 2*7 pin front panel I/O header
  - One 2*5 pin 1394 header

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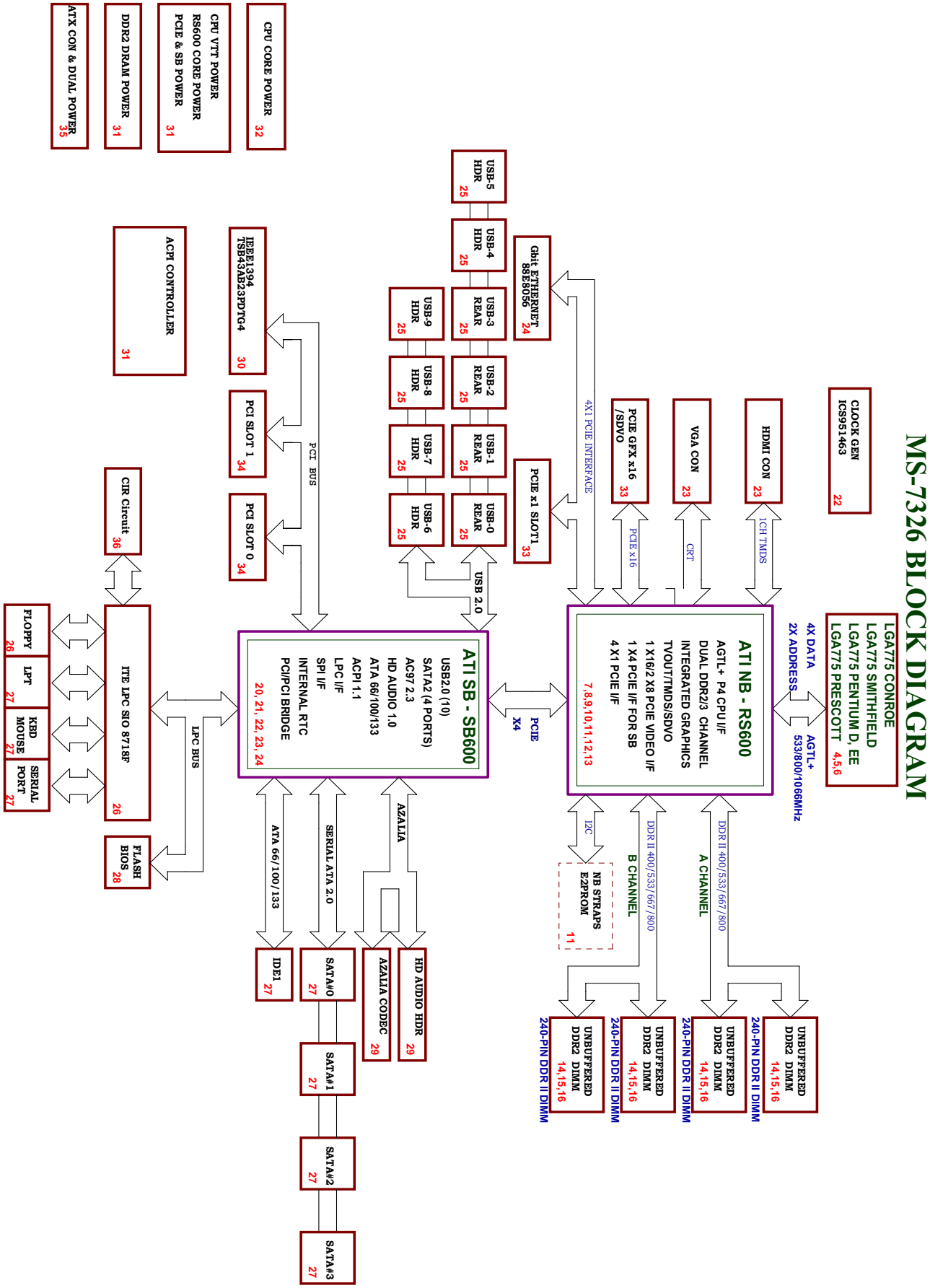
Block Diagram



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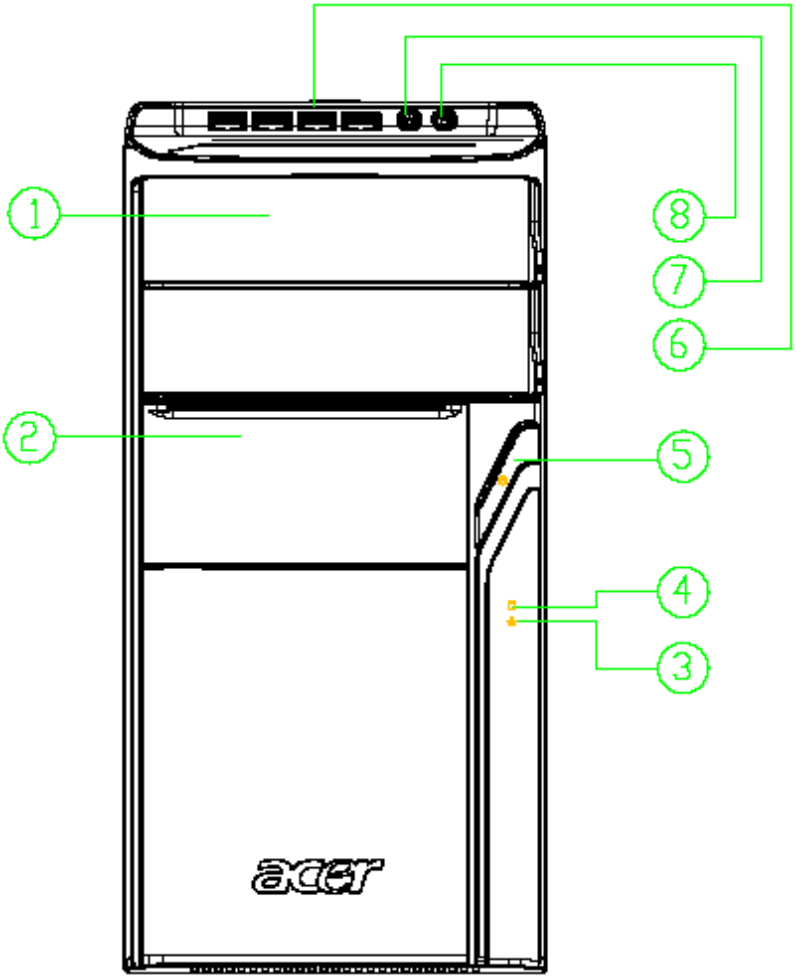
Aspire AM5610

Front Panel



#	Description
1	ODD Door
2	Slide Door
3	LAN LED
4	HDD LED
5	Power Button
6	USB ports
7	MIC Jack
8	Speaker Out Jack

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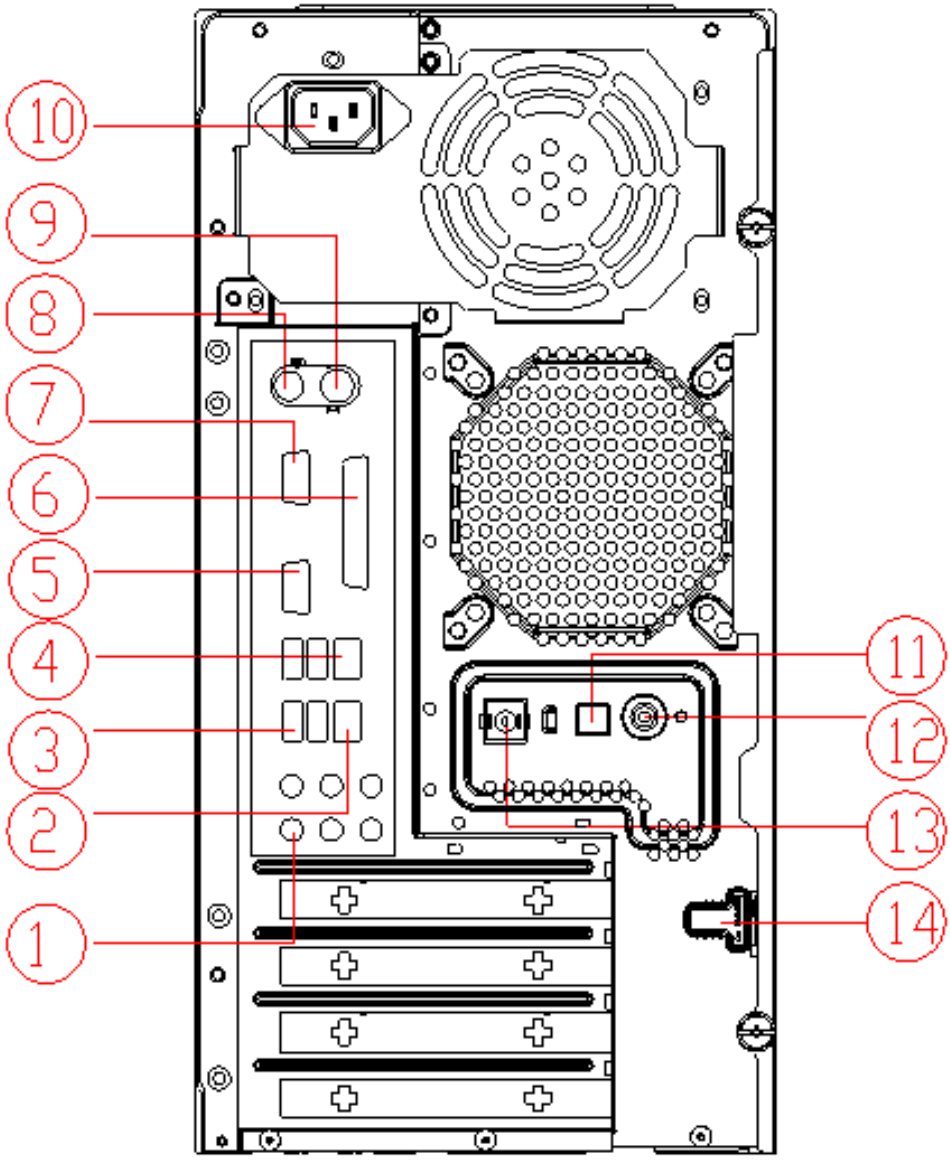
Rear Panel



#	Description	#	Description
1	6 audio jacks (7.1 HD audio jack)	8	PS/2 Keyboard
2	LAN Port	9	PS/2 Mouse
3	USB Ports	10	Power Cable Port
4	1394 Port	11	SPDIF Bracket
5	CRT/LCD Port	12	SPDIF Port
6	Parallel Port	13	Recovery Switch Holder
7	HDMI Port	14	Lock Handle

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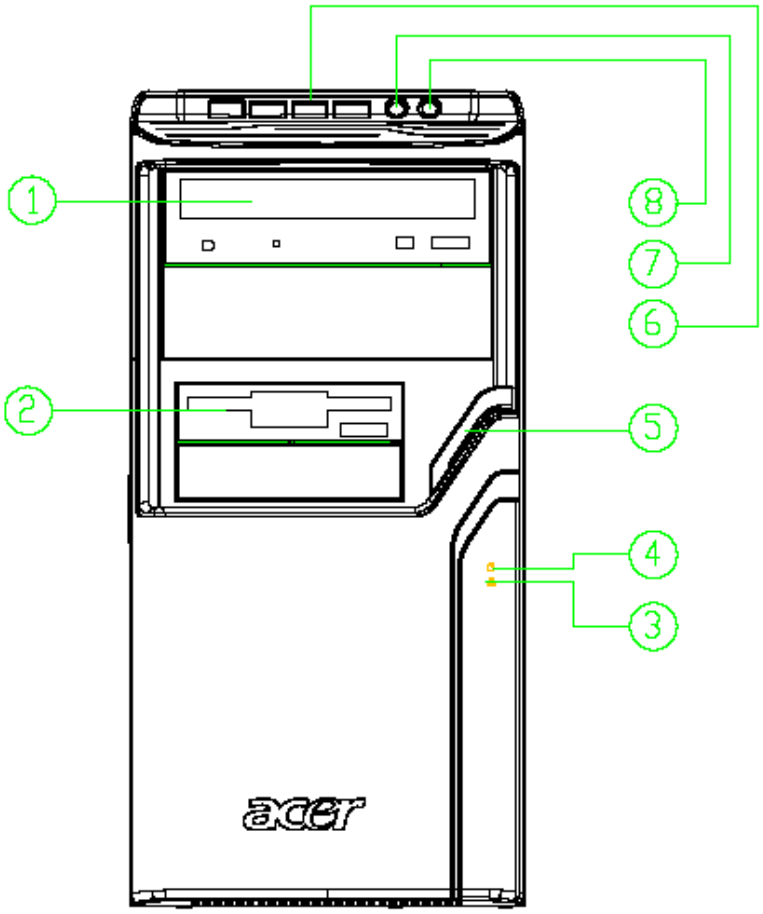
Front Panel



#	Description
1	Optical Device
2	3.5” Device
3	LAN LED
4	HDD LED
5	Power Button
6	USB Port
7	MIC Jack
8	Speaker Out Jack

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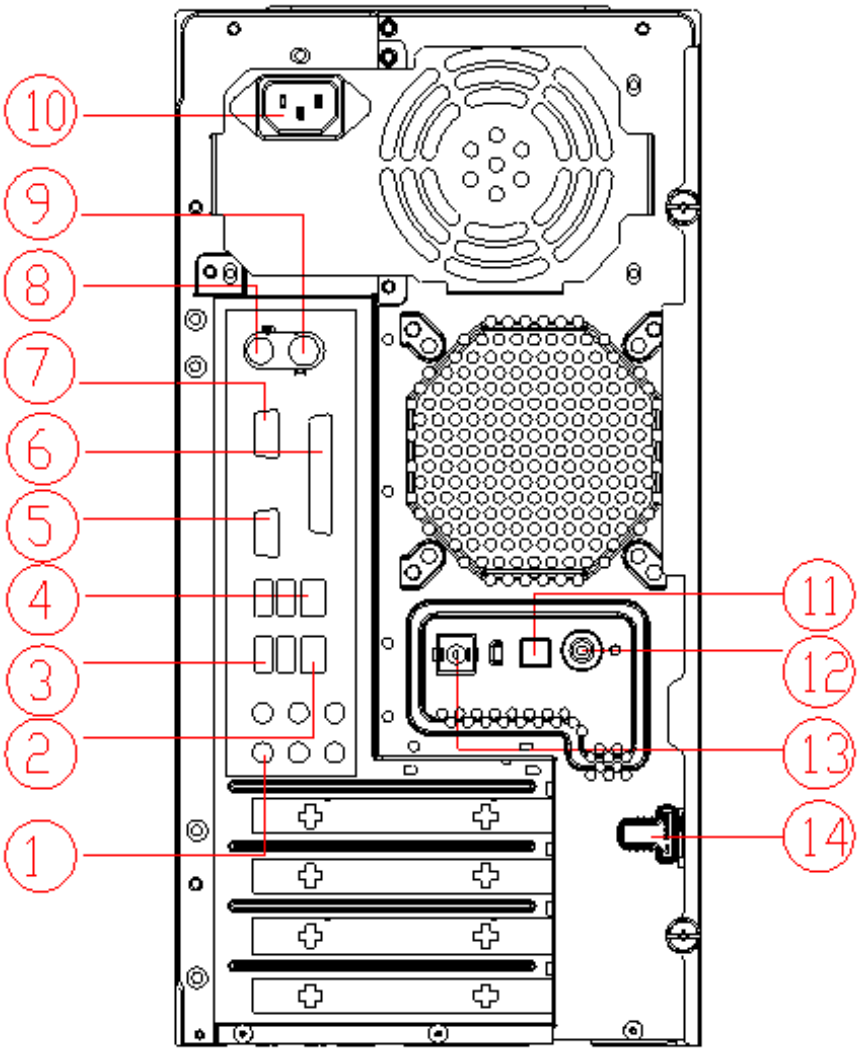
Rear Panel



#	Description	#	Description
1	6 audio jacks (7.1 HD audio jack)	8	PS/2 Keyboard
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5	CRT/LCD Port	12	SPDIF Port
6	Parallel Port	13	Recovery Switch Holder
7	HDMI Port	14	Lock Handle

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Acer Empowering Technology

Acer's innovative Empowering Technology makes it easy for you to access frequently used functions and manage your new Acer notebook. It features the following handy utilities:

- **Acer eRecovery Management** backs up and recovers data flexibly, reliably and completely.
- **Acer eDataSecurity Management** protects data with passwords and advanced encryption algorithms.
- **Acer ePerformance Management** improves system performance by optimizing disk space, memory and registry settings.

For more information, press the e key to launch the Empowering Technology menu, then click on the appropriate utility and select the Help or Tutorial function.

Empowering Technology password

Before using Acer eRecovery Management, you must initialize the Empowering Technology password. Right click on the Empowering Technology toolbar and select **Password Setup** to do so. If you do not initialize the Empowering Technology password, you will be prompted to do so when running Acer eRecovery Management for the first time.

Acer eRecovery Management

Acer eRecovery Management is a powerful utility that does away with the need for recovery disks provided by the manufacturer. The Acer eRecovery Management utility supports Microsoft Windows XP Home Service Pack 2, Microsoft Windows XP Media Center Edition Wallop 2, Microsoft Windows Vista Home Basic, Premium, Business, and Ultimate. The Acer eRecovery Management utility occupies space in a hidden partition on your system's HDD. User-created backups are stored on D:\ drive.

Acer eRecovery Management provides you with:

- Password protection
- Recovery of applications and drivers
- Image/data backup:
  - Back up to HDD (set recovery point)
  - Back up to CD/DVD
- Image/data recovery tools
  - Recovery from a hidden partition (factory defaults)
  - Recovery from the HDD (most recent user-defined recovery point)
  - Recovery from CD/DVD

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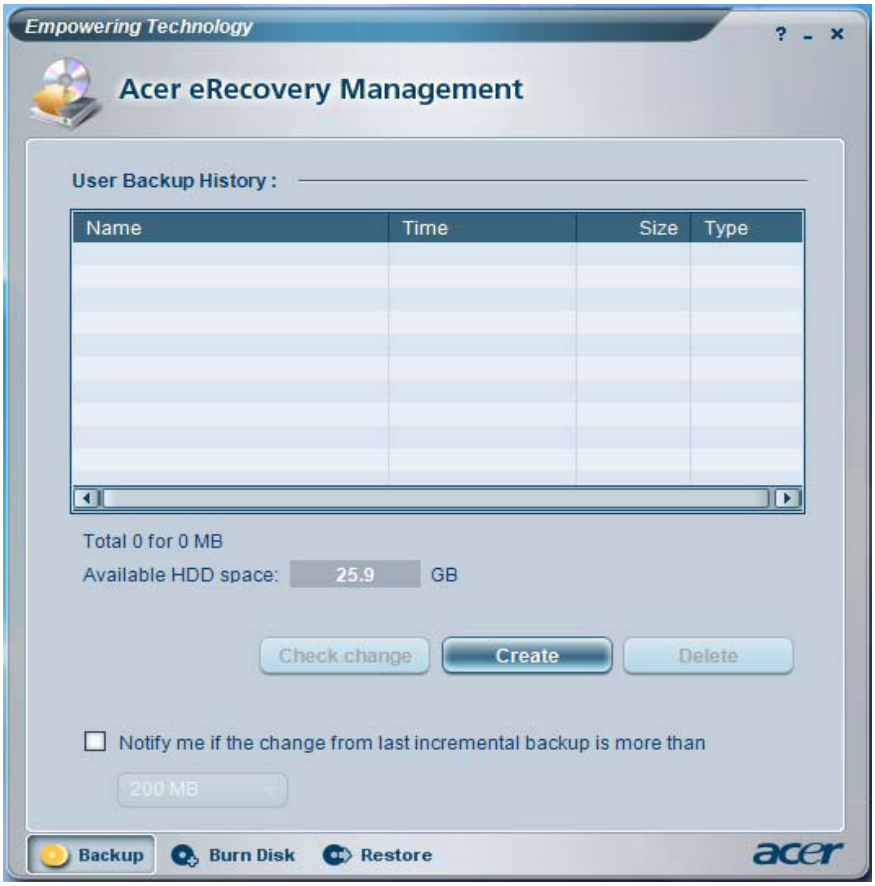

For more information, please refer to **Acer eRecovery Management**.

Note: If your computer does not come with a Recovery CD or System CD, please use Acer eRecovery Management's **System backup to optical disk** feature to burn a backup image to CD or DVD. To ensure the best results when you recover a system by using a CD or Acer eRecovery Management, detach all peripherals (except the external Acer ODD, if your computer has one), including your Acer ezDock.

Acer eDataSecurity Management

Acer eDataSecurity Management is a handy file encryption utility that protects your files from being accessed by unauthorized persons. It is conveniently integrated with Windows explorer as a shell extension for quick and easy data encryption/decryption and also supports on-the-fly file encryption for MSN Messenger and Microsoft Outlook.

Note: The Acer eDataSecurity Management setup wizard will prompt you for a supervisor password and default encryption. This encryption will be used to encrypt files by default, or you can choose to enter your won file-specific password when encrypting a file.

Note: The password used to encrypt a file is the unique key that the system needs to decrypt it. If you lose the password, the supervisor password is the only other key capable of decrypting the file. If you lose both passwords, there will be no way to decrypt your encrypted file. **Be sure to safeguard all related passwords!**

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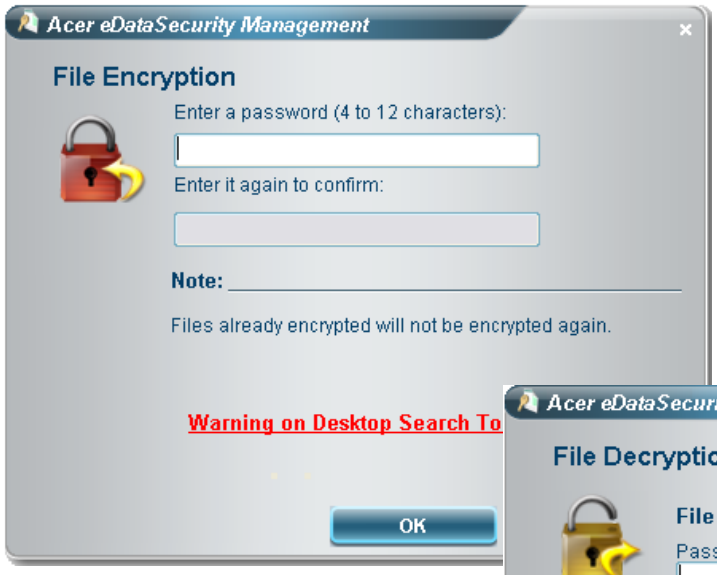
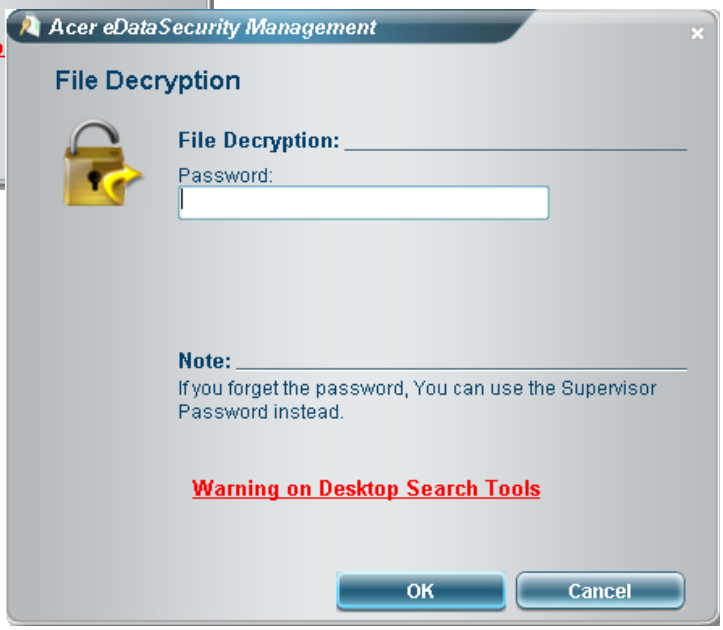
Acer eDataSecurity Management
Initialize Supervisor Password
The Supervisor Password serves two purposes:
(1) To grant accesses to the Personal Secure Disk.
(2) To provide you a "last resort" to decrypt any files encrypted before by eDataSecurity.
Please record and keep it in a secure place, and never disclose it to anyone.
Initialize Supervisor Password
Enter Supervisor Password:
****
Enter it again to confirm:
****
Next


Acer eDataSecurity Management
File Encryption
Enter a password (4 to 12 characters):
Enter it again to confirm:
Note:
Files already encrypted will not be encrypted again.
Warning on Desktop Search To
OK



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Acer ePerformance Management

Acer ePerformance Management is a system optimization tool that boosts the performance of your Acer notebook. It provides and expresses optimization method to release unused memory and disk space quickly. The user can also enable advanced options for full control over the following option:

- Memory optimization: to releases unused memory and check usage
- Disk optimization: to remove unneeded items and files
- Speed optimization: to improve the usability and performance of your Windows XP system

For more information, please refer to **Acer eRecovery Management**.

Note: If your computer does not come with a Recovery CD or System CD, please use Acer eRecovery Management's **System backup to optical disk** feature to burn a backup image to CD or DVD. To ensure the best results when recovering your system using a CD or Acer eRecovery Management, detach all peripherals (except the external Acer ODD, if your computer has one), including your Acer ezDock.

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Acer eRecovery

Acer eRecovery is a tool to quickly backup and restore the system. Users can create and save a backup of the current system configuration to hard drive, CD, or DVD. Acer eRecovery consists of the following functions:

1. Create backup
2. Restore from backup
3. Create factory default image CD
4. Re-install bundled software without CD
5. Change Acer eRecovery password

Create Backup

Users can create and save backup images to hard drive, CD, or DVD. Please follow the steps below to create backup.

1. Boot to Windows XP.
2. Press <Alt> + <F10> to open the Acer eRecovery utility.
3. Enter the password to proceed. The default password is six zeros.
4. In the Acer eRecovery window, select **Recovery settings** and click **Next**.
5. In the Recovery settings window, select **Backup snapshot image** and click **Next**.
6. Select the backup method:
   - Use **Backup to HDD** to store the backup disc image on drive D:\
   - **Backup to optical device** to store the backup disc image on CD or DVD. This option is only available on systems that include an optical disc burner.
7. After choosing the backup method, click **Next**.

Then follow the instruction on the screen to complete the process.

Restore from Backup

Users can restore backup previously created (as stated in the **Create Backup** section) from hard drive, CD, or DVD. Please follow the steps below to restore from backup.

1. Boot to Windows XP.
2. Press <Alt> + <F10> to open the Acer eRecovery utility.
3. Enter the password to proceed. The default password is six zeros.
4. In the Acer eRecovery window, select **Recovery actions** and click **Next**.
5. Select the desired restore action and follow the instructions on screen to complete the restore process.

Create Factory Default Image CD

When the System CD and Recovery CD are not available, you can create them by using this feature. Please follow the steps below to create factory default image CD.

1. Boot to Windows XP.
2. Press <Alt> + <F10> to open the Acer eRecovery utility.
3. Enter the password to proceed. The default password is six zeros.
4. In the Acer eRecovery window, select **Recovery settings** and click **Next**.
5. In the Recovery settings window, select **Burn image to disc** and click **Next**.
6. In the Burn image to disc image, select **Factory default image** and click **Next**.
7. Follow the instruction s on screen to complete the process.

Re-install Bundled Software without CD

Acer eRecovery stores pre-loaded software internally for easy driver and application re-installation.

1. Boot Windows XP.
2. Press <Alt> + <F10> to open the Acer eRecovery Utility.

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3. Enter the password to proceed. The default password is six zeros.
4. In the Acer eRecovery window, select **Recovery actions** and **Next**.
5. In the Recovery settings window, select **Re-install applications** / **drivers** and click **Next**.
6. Select the desired driver / application and follow the instructions on screen to re-install.

After the first launch, Acer eRecovery prepared all the needed software and may take few seconds to bring up the software content window.

Change Password

Acer eRecovery and Acer disc-to-disc recovery are protected by a password that can be changed by users. Follow the steps below to change the password in Acer eRecovery.

1. Boot to Window XP.
2. Press <Alt> + <F10> to open the Acer eRecovery utility.
3. Enter the password to proceed. The default password is six zero.
4. In the Acer eRecovery window, select **Recovery settings** and click **Next**.
5. In the Recovery settings window, select **Password: Change Acer eRecovery password** and click **Next**.

Follow the instructions on screen to complete the process.

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Acer Disc-to-Disc Recovery

Restore without a Recovery CD

This recovery process helps you restore the C:\ drive with the original software content that is installed when you purchase your system. Follow the steps below to rebuild your C:\ drive.

> **Note:** The C:\ drive will be reformatted and all data will be erased. It is important to back up all data files before you use this option.

1. Restart the system.
2. While the Acer logo comes out, press <Alt> + <F10> to enter the recovery process.
3. The message **The system has password protection. Please enter 000000:** will be displayed.
4. Enter six zeros and continue.
5. The Acer Recovery main page appears.
6. Use the arrow keys to scroll through the items (operating system versions) and press <Enter> to select.

Multilingual Operating System Installation

Follow the instructions to choose the operating system and language you prefer when you first power on the system.

1. Turn on the system.
2. Acer's multilingual operating system selection menu will pop up automatically.
3. Use the arrow keys to scroll to the language version you want. Press <Enter> to confirm your selection.
4. The operating system and language you choose now will be the only option for future recovery operations.
5. The system will install the operating system and language you choose.

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Hardware Specification and Configuration

Processor

Item	Specification
Type	Intel Celeron/ Celeron D/ Pentium 4/ Pentium D/ Core 2 Duo/ Core 2 Extreme/ Quad Core CPUs (for desktop CPU information in detail, please refer to http://www.intel.com/products/desktop/processors/index.htm?iid=process+desktop)

System Main Chipset

Item	Specification
Core logic	ATI RS600 + ATI SB600
Super I/O controller	ITE IT8718F with hardware monitor
LAN controller	Marvell 88E8056
Memory controller	ATI RS600
1394 controller	TI TSB43AB23
Serial ATA	ATI SB600
Audio subsystem controller	Realtek ALC888
VGA controller	ATI RS600

North Bridge

Item	Specification
General information	ATI RS600 supports Core 2 Duo processors, DDR2 and DDR3 memory, and its graphics subsystem features a new graphics core twice as fast as the older Radeon Xpress 200.
Feature	• AVIVO (ATI's video processing engine) support • High bandwidth digital content protection support • HDMI output support • Can cope with the HDCP anti-piracy system

South Bridge

Item	Specification
Chipset	ATI SB600

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Item	Specification
Feature	• A-Link Xpress II interface to the North bridge • 1/2/4-lane A-Link Xpress II interface • Supports PCI rev. 2.3 specifications • Supports up to 6 master devices • Supports 40-bit addressing • Supports interrupt steering for plug-n-play devices • Supports concurrent PCI operations • Supports hiding of PCI devices by BIOS/hardware • Supports spread spectrum • 5 OHCI and 1 EHCI Host controllers to support 10 USB ports • All 10 ports are USB 1.1/2.0 compatible • Supports ACPI S1~S5 • Supports legacy keyboard/mouse • SMBus Rev. 2.0 compliant • Supports programmable level/edge triggering on each channels • Supports serial interrupt on quiet and continuous modes • Supports LPC based super I/O and flash devices • Supports two master/DMA devices • Supports TPM version 1.1/1.2 devices for enhanced security • Supports SPI devices • Supports four SATA ports, complying with SATA 2.0 specifications • Supports both AHCI mode and IDE mode • Supports advanced power management with AHCI mode • Single PATA channel support • Support PIO, multi-word DMA, and Ultra DMA 33/66/100/133 modes • 32x32 byte buffers on each channel for buffering • Swap bay support by tri-state IDE signals • Supports Messages Signaled Interrupt (MSI) • Integrated IDE series resistors • Supports for both audio and modem Codecs • Compliant with AC-97 codec Rev. 2.3 • 6/8 channel support on audio codec • Multiple functions for audio and modem Codec operations • Bus master logic • Supports up to 3 codecs simultaneously • Supports SDIF output • Separate bus from the HD audio • ACPI power management timer • ACPI specification 3.0 compliant power management schemes • Supports C2, C3, C4 • Supports S0, S1, S2, S3, S4, and S4

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Wake-up Event Specification (Default Setting in BIOS)

	S1	S3	S4	S5
Power button	Enable (default), Disabled	Enabled (default), Disabled	Enabled (default), Disabled	Enabled (default), Disabled
PS2 keyboard	Enabled, Disabled (default)	Enabled, Disabled (default)	N/A	N/A
USB keyboard	Enabled (default), Disabled	Enabled (default), Disabled	Enabled (default) Disabled	N/A
PME	Enabled (default), Disabled	Enabled (default), Disabled	Enabled (default), Disabled	Enabled (default), Disabled
Modem (ring)	Enabled, Disabled (default)	Enabled, Disabled (default)	Enabled, Disabled (default)	Enabled, Disabled (default)
RTC	Enabled, Disabled (default)	Enabled, Disabled (default)	Enabled, Disabled (default)	Enabled, Disabled (default)

Front Panel LED States

State for a Single Color Power LED (Blue)

LED State	Description	ACPI State
Steady Blue	Running	S0
Blinking Blue	Sleeping	S1, S3
Off	Power Off	S4, S5

State for LAN LED (Blue)

LED State	Description	Controller State
Blinking blue	Active	Active
Off	Idle	Idle

State for a Single Color Storage LED (Blue)

LED State	Description	Controller State
Blinking blue	Active	Active
Off	Idle	Idle

System Memory

Item	Specification
Feature	• Four DDR2 sockets • 256MB/ 512MB/ 1GB/ 2GB DDR2 DIMMs support • Supports up to 8GB of system memory • Dual channel function enabled when plugging in two same memory size DDR2 memory modules • DDRII memory 533/667/800MHz support • I/O voltage of 1.8V for DDRII • Improved flexible memory architecture

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Super I/O

Item	Description
Chip	ITE IT8718F
Feature	• Low pin count interface • Serial flash I/F for BIOS • Consumer remote control (TV remote) IR with power-up feature • 8-pin VID • SST interface • PECI interface (host) • Multi curve for one fan control • Multi sensor for one fan control • New PCIRST circuit • PC98/99/2001, ACPI and LANDesk compliant • Enhanced hardware monitor • Fan speed controller • SmartGuardian controller • Single +5V power supply • Two 16C550 UARTs • Floppy disk controller • IEEE 1284 parallel port • Keyboard controller • 48 general purpose I/O pins • Watchdog timer • ITE innovative automatic power-failure resume and power button debounce • Serial IRQ support • Vbat and Vcch support • Single +5V power supply • 128-pin QFP

USB Interface

Item	Description
Chip	ATI SB600

Feature	• Five OHCI and one EHCI host controllers to support ten ports
	• Three 2*5 onboard headers
	  • Four ports for front daughter board
	  • Two ports for internal USB card reader + IR module
	• Compliant to standard Intel FPIO pin definition
	• USB 2.0/1.1 support

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Audio Interface

Item	Description
Chip	Realtek ALC888 (high definition audio)
Feature	• 48-pin LQFP green package • High performance DACs with 95dB SNR (A-Weighting), ADCs with 85dB SNR (A-Weighting) • Meets performance requirements for audio on PC2001 systems and Microsoft WLP 2.x • Ten DAC channels 16/20/24bit PCM format support for 7.1 sound playback, plus two channels of independent stereo sound output (multiple streaming) through the front panel output • Two stereo ADCs 16/20/24bit PCM format support, one for stereo microphone, one for legacy mixer recording • All DACs 44.1/48/96/192KHz sample rate support • 16/20/24bit S/PDIF out supports 44.1/48/96/192KHz sample rate. • 16/20/24bit S/PDIF in supports 44.1/48/96KHz sample rate. • Up to four channels of microphone array input are supported for AEC/BF application. • High-quality analog differential CD input • External PCBEEP input and built-in digital BEEP generator • Reserve analog mixer architecture for backward compatibility with AC'97 • Wide range (-80dB ~ +42dB) volume control with 1.5dB resolution of analog to analog mixer gain • Two GPIOs (General Purpose Input/Output) for customized applications • Digital power support: 3.3V • Analog power support: 3.5V ~ 5.25V • Enhanced S/PDIF in circuitry ensures compatibility with consumer DVD players. • Pin compatible with the ALC880 and ALC882

1394 Interface

Item	Description
Chip	TSB43AB23PDTG
Feature	• Compliant with the IEEE 1394-1995 Release 1.0 and support IEEE 1394a P2000 specifications with full 1394a P2000 • Compliant with the PCI V2.2 specification and card bus interfaces support • Three 1394a ports enable connections at 100/200/400Mbps • Equipped with an OHCI compliant programming interface and I^2C EEPROMs or four-wire serial ROMs

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Hardware Monitor Function

Item	Description
Feature	• Smart fan control system, Thermal Cruise and Speed Cruise support • Six VID input pins for CPU Vcore identification • Two thermal inputs from optionally remote thermistors or 2N3904 transistors or Pentium 4 thermal diode output • Four external voltage detect inputs • Three intrinsic voltage monitoring (typical for Vbat, +5VSB, +5CC) • Two fan speed monitoring inputs • Two fan speed control (DC analog output) • WATCHDOG comparison of all monitored items • Overheat indication output • Issue SMI#, IRQ, OVT# to activate system protection

BIOS

Item	Description
BIOS code programmer	Phoenix Award
Version	Phoenix BIOS 6.00 PC
Feature	• ROM type: flash ROM • ROM size: 4MB • Protocol supported: PCIX 1.0, PCI 2.2, APM 1.2, VESA/DPMS (VBE/PM V1.1), SMBIOS 2.3, E-IDE 1.1, ACPI 1.0b, ESCD 1.03, PnP 1.0a, Bootable CD-ROM 1.0 • Boot from CD-ROM feature: yes • LS-120 FDD drive support: yes • BIOS boot block feature: yes • Supports Microsoft SLP 2.0 for Windows Vista

Note: The BIOS can be overwritten/upgraded by using the flash utility.

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BIOS Hotkey List

Hotkey	Description
DEL	To enter BIOS Setup Utility: press the DEL key while the system is booting to enter BIOS Setup Utility.

Environment Requirements

Item	Specification
Temperature	
Operating	+5^{O}C ~ +35^{O}C
Non-operating	-20^{O}C ~ +60^{O}C (storage packed), -10^{O}C ~ +60^{O}C (unpacked)
Humidity	
Operating	15% to 80% RH, non-condensing
Non-operating	10% to 90% RH, non-condensing at 40^{o}C
Vibration	
Operating	5 ~ 500Hz, 2.20g RMS random, 10 minutes per axis in all three axes
Non-operating	5 ~ 500Hz, 1.09g RMS random, one hour per axis in all three axes

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Power Management Function (ACPI Support Function)

Device Standby Mode

- Independent power management timer for hard disk drive devices (zero to 15 minutes, time step = one minute).
- Hard disk drive goes into Standby mode (for ATA standard interface).
- Disable V-sync to control the VESA DPMS monitor.
- Resume method: device activated (keyboard for DOS, keyboard & mouse for Windows).
- Resume recovery time: three to five seconds.

Global Standby Mode

- Global power management timer (two to 120 minutes, time step = 10 minutes).
- Hard disk drive goes into Standby mode (for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Resume method: return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- Resume recovery time: seven to 10 seconds.

Suspend Mode

- Independent power management timer (two to 120 minutes, time step = 10 minutes) or pushing external switch button.
- CPU goes into SMM.
- CPU asserts STPCLK# and goes into the Stop Grant state.
- LED on the panel turns amber color.
- Hard disk drive goes into SLEEP mode (for ATA standard interface).
- Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- Ultra I/O and VGA chip go into power saving mode.
- Resume method: return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- Return to original state by pushing external switch button, modem ring in and USB keyboard for ACPI mode.

ACPI

- ACPI specification 1.0b
- S0, S1, S3 and S5 sleep state support
- Onboard device power management support
- Onboard device configuration support

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Setup Utility

About the Setup Utility

The computer uses the Phoenix Award BIOS (Basic Input and Output System) with support for Windows Plug and Play. The CMOS chip on the main board contains the ROM setup instructions for configuring the main board BIOS.

The BIOS Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in Battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you have stored in CMOS. The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options. This Setup Utility should be used:

- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Control Keys

Item	Description
←↑↓→	Move to the item you want to select
ENTER	Select the item you want or enter the sub-menu
ESC	Retreat from the current page
Pg Up	Increase the numeric value or make changes
Pg Dn	Decrease the numeric value or make changes
F1	General help
F5	Restore the previous CMOS value from CMOS
F7	Load the factory default setting
F10	Save all the CMOS changes
Exit	Leave the Setup Utility

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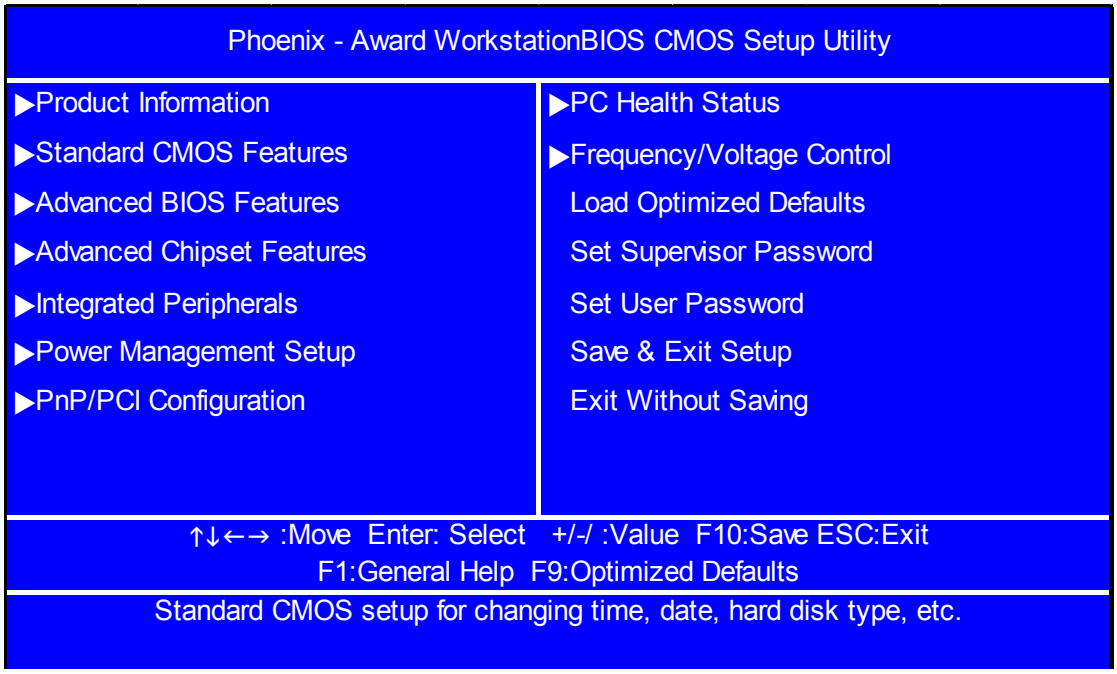
Entering the Setup Utility

Power on the computer and the system will start POST (Power On Self Test). When the message **Press DEL to enter SETUP** appears on the screen, press the **DEL** key to enter the setup menu. Once you enter the Phoenix Award BIOS CMOS Setup Utility, the main menu will appear on the screen. Use arrow keys to select the item you want and press **ENTER** to confirm the setting or enter the sub-menu.



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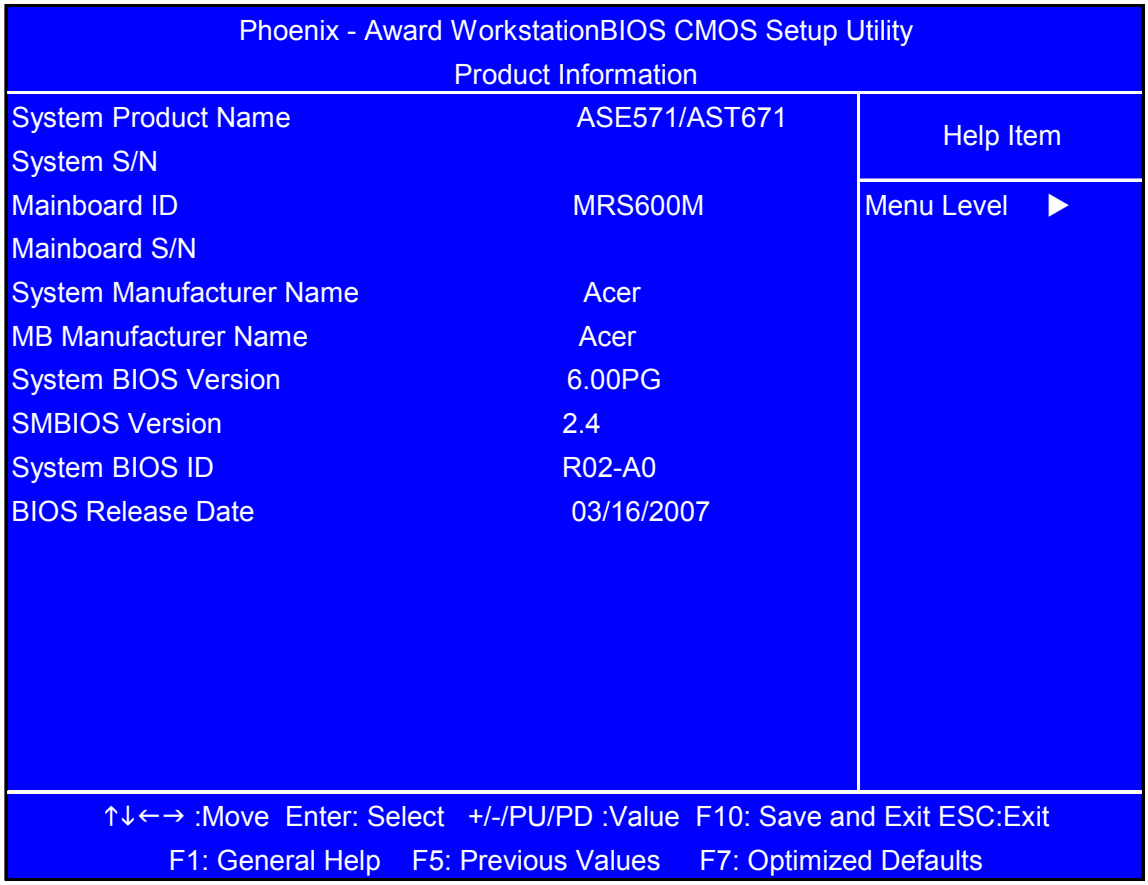
Product Information

This page displays product information about your system. You can press **ESC** to return to the main menu setting page.



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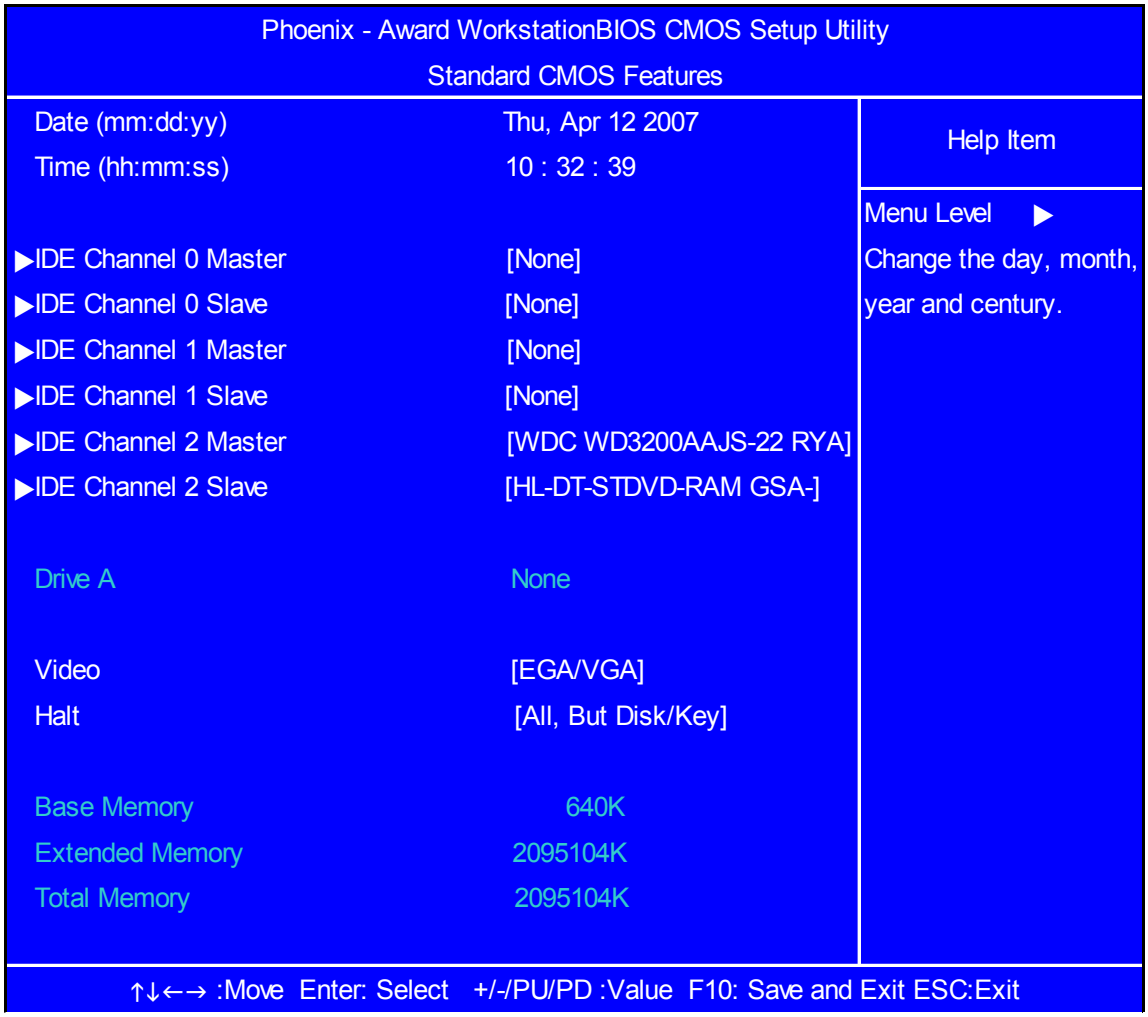
Standard CMOS Features

This page displays the standard CMOS features. You can press **ESC** to return to the main menu setting page.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
Standard CMOS Features
Date (mm:dd:yy) Thu, Apr 12 2007
Time (hh:mm:ss) 10 : 32 : 39
▶IDE Channel 0 Master [None]
▶IDE Channel 0 Slave [None]
▶IDE Channel 1 Master [None]
▶IDE Channel 1 Slave [None]
▶IDE Channel 2 Master [WDC WD3200AAJS-22 RYA]
▶IDE Channel 2 Slave [HL-DT-STDVD-RAM GSA-]
Drive A None
Video [EGA/VGA]
Halt [All, But Disk/Key]
Base Memory 640K
Extended Memory 2095104K
Total Memory 2095104K
Help Item
Menu Level ▶
Change the day, month, year and century.
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit

Date and Time

The Date and Time items show the current date and time set on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

SATA Devices

This main board features four SATA connectors supporting four SATA drives. SATA refers to Serial ATA (Advanced Technology Attachment), the standard interface for the IDE hard drives which are currently used in most PCs.

Drive A

This item will identify the type of floppy disk drive A that has been installed.

Video

This item defines the video mode of the system.

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Halt On

This item determines whether the system stops or not if an error occurs during system boot-up. At defaults **All, But Keyboard**, the boot will be interrupted for all errors except a keyboard error.

Base Memory, Extended Memory, and Total Memory

These items are automatically detected by the system at start-up time. You can not make changes to these fields.

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Advanced BIOS Features

This page displays advanced BIOS features. You can press **ESC** to return to the main menu setting page.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
Advanced BIOS Features
▶CPU Feature [Press Enter]
▶Removable Device Priority [Press Enter]
▶Hard Disk Boot Priority [Press Enter]
▶CD-ROM Boot Priority [Press Enter]
Virus Warning [Disabled]
CPU L3 Cache [Enabled]
Inter EIST [Enabled]
Quick Power On Self Test [Enabled]
First Boot Device [Hard Disk]
Second Boot Device [CDROM]
Third Boot Device [Removable]
Boot Other Device [Enabled]
Boot Up Floppy Seek [Enabled]
Boot Up Num Lock Status [On]
Gate A20 Option [Fast]
Typematic Rate Setting [Disabled]
X Typematic Rate (chars/sec) 6
X Typematic Delay (Msec) 250
Security Option [Setup]
APIC Mode [Enabled]
MPS Version Control For OS [1.4]
OS Select For DRAM > 64MB [Non-OS2]
HDD S.M.A.R.T. Capability [Disabled]
Silent Boot [Enabled]
Small Logo (EPA) Show [Disabled]
Configuration Table [Disabled]
Bootblock Write Protect [Enabled]
Help Item
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

Virus Warning

This item enables or disables the boot sector virus protection.

CPU L3 Cache

All processors that can be installed in this mainboard use level 3 (L3) cache memory and may improve performance depending on the CPU/chipset. Leave this item at the default setting for better performance.

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Intel EIST

Enabling Enhanced Intel SpeedStep Technology (EIST) can effectively lower the processor voltage and core frequency, which may result in decreased average power consumption and decreased average heat production (depending on system design and usage).

Quick Power On Self Test

Use this item to shorten the POST and have the system startup faster. You might like to enable this item after you are confident that your system hardware is operating smoothly.

First / Second / Third Boot Device

Use this three items to select the priority and order of the devices that your system searches for an operating system when the system is powering on.

Boot Other Device

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the First, Second, and Third boot devices.

Boot Up Floppy Seek

This item controls whether the BIOS checks for a floppy drive while booting up.

Boot Up NumLock Status

This item defines if the keyboard NumLock key is active when your system is booted.

Gate A20 Option

This item defines how the system handles legacy software that was written for an earlier generation of processors. Set this item for the default value.

Typematic Rate Setting

If this item is enabled, you can use the following two items to set the Typematic Rate and the Typematic Delay settings for the keyboard. The default setting is <Disabled> which uses the defaults below:

- Typematic Rate (Chars/Sec): Use this item to define how many characters per second are generated by a held-down key. The default setting is 6.
- Typematic Delay (Msec): Use this item to define how many milliseconds must elapse before a held-down key begins generating repeat characters. The default setting is 250.

Security Option

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the Setup Utility.

APIC Mode

This item allows you to enable or disable the APIC (Advanced Programmable Interrupt Controller) mode. APIC provides symmetric multi-processing (SMP) for systems.

MPS Version Control For OS

This item specifies which version of MPS (Multi-Processor Specification) this main board will use. Set this item for its default setting.

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OS Select for DRAM > 64 MB

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default.

HDD S.M.A.R.T Capability

The S.M.A.R.T (Self-Monitoring, Analysis, and Reporting Technology) system is a diagnostics technology that monitors and predicts device performance. S.M.A.R.T software resides on both the disk drive and the host computer.

Silent Boot

This item enables or disables the Silent Boot function.

Small Logo (EPA) Show

Determines whether the EPA logo appears during boot up.

Configuration Table

This item enables or disables the Configuration Table in BIOS setting.

Bootblock Write Protect

When enabled, Boot block write protection allows the boot block area to be protected by a write-protect pin.

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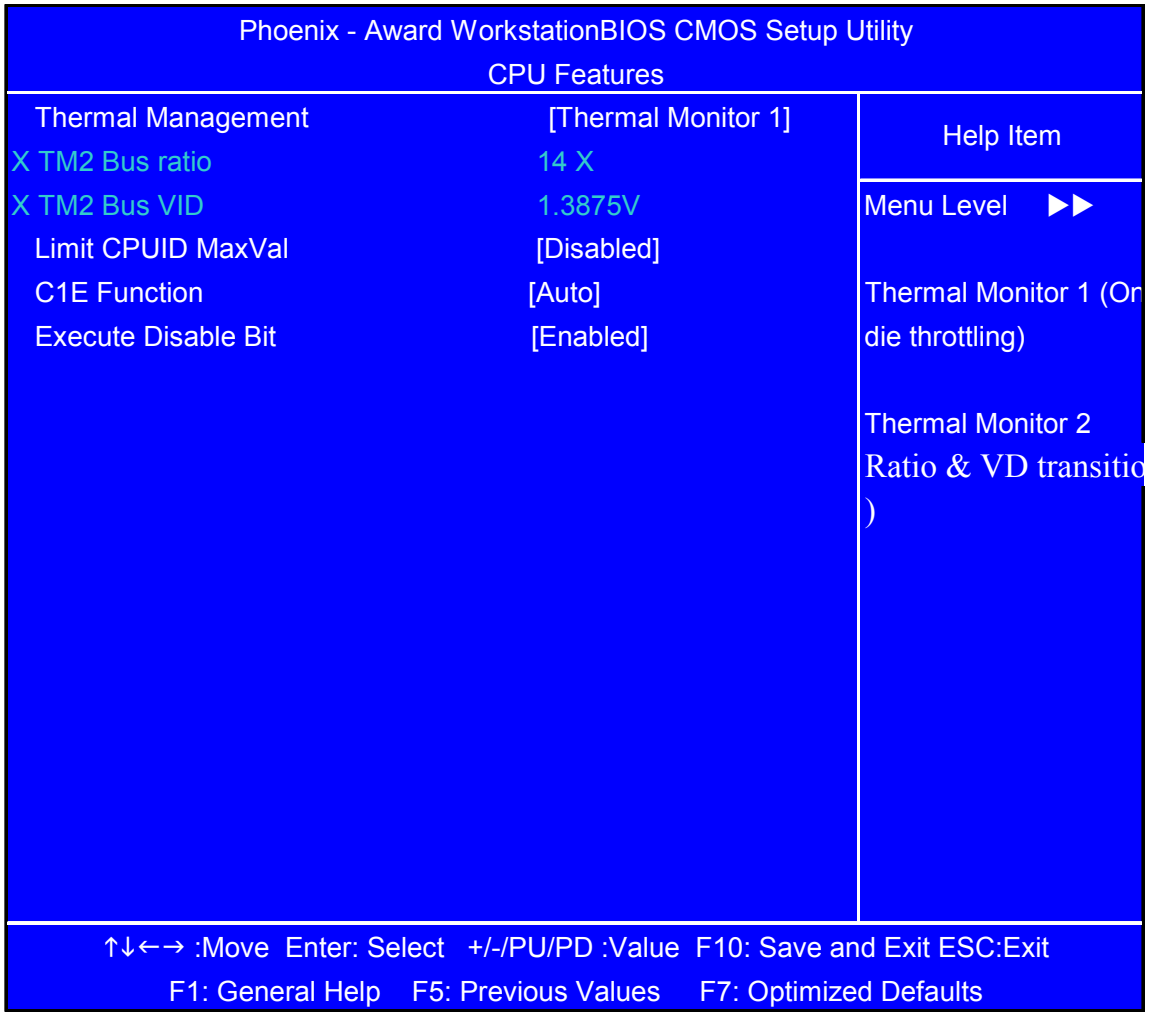
CPU Feature

Scroll to this item and press **ENTER** to enter the sub-menu on next page.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
CPU Features
Thermal Management [Thermal Monitor 1]
X TM2 Bus ratio 14 X
X TM2 Bus VID 1.3875V
Limit CPUID MaxVal [Disabled]
C1E Function [Auto]
Execute Disable Bit [Enabled]
Help Item
Menu Level ▶▶
Thermal Monitor 1 (On die throttling)
Thermal Monitor 2 Ratio & VD transitio)
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

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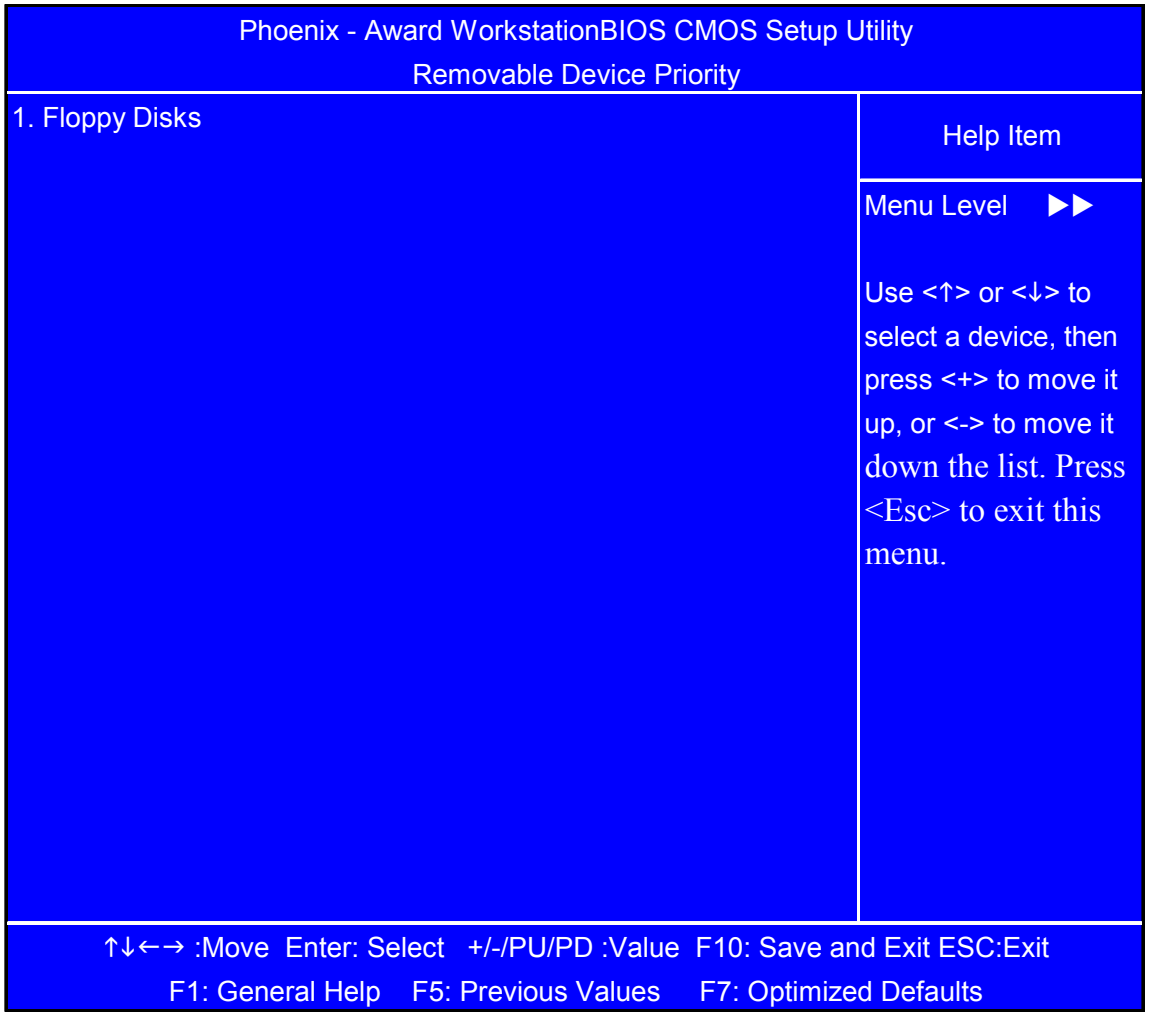
Removable Device Priority

Scroll to this item and press **ENTER** to enter the sub-menu on next page.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
Removable Device Priority
1. Floppy Disks
Help Item
Menu Level ▶▶
Use <↑> or <↓> to select a device, then press <+> to move it up, or <-> to move it down the list. Press <Esc> to exit this menu.
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

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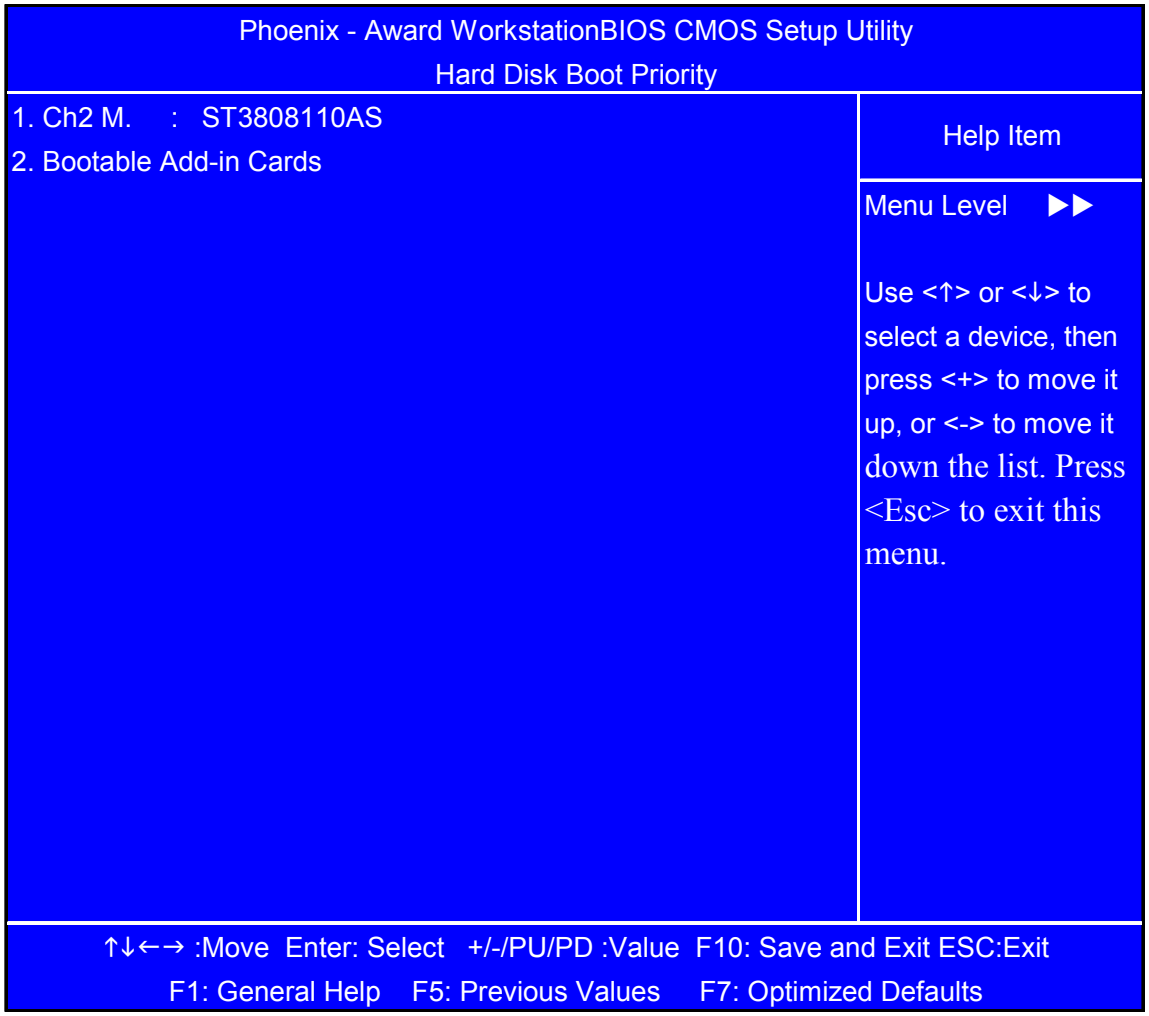
Hard Disk Boot Priority

Scroll to this item and press **ENTER** to enter the sub-menu on next page.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
Hard Disk Boot Priority
1. Ch2 M. : ST3808110AS
2. Bootable Add-in Cards
Help Item
Menu Level ▶▶
Use <↑> or <↓> to select a device, then press <+> to move it up, or <-> to move it down the list. Press <Esc> to exit this menu.
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

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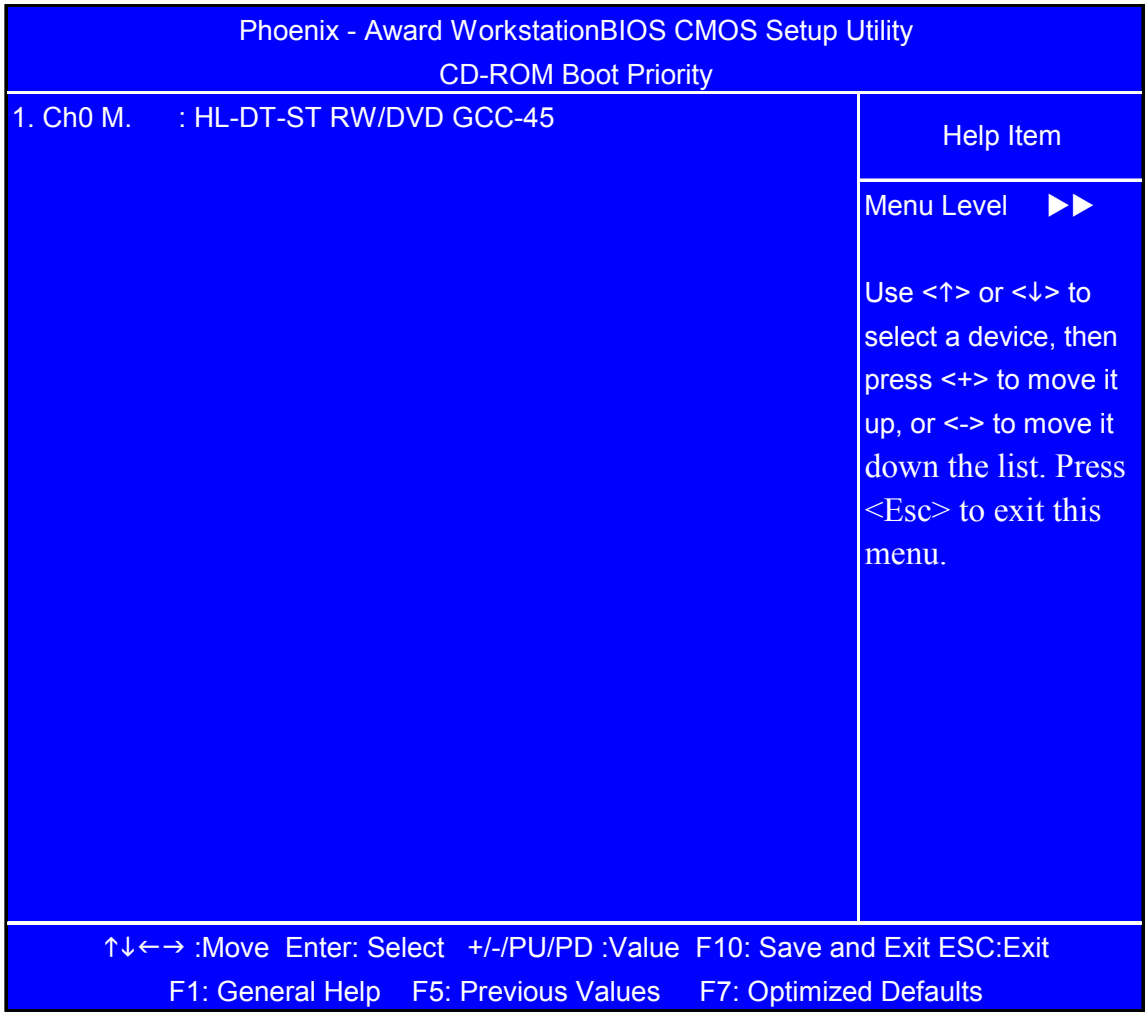
CD-ROM Boot Priority

Scroll to this item and press **ENTER** to enter the sub-menu on next page.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
CD-ROM Boot Priority
1. Ch0 M. : HL-DT-ST RW/DVD GCC-45
Help Item
Menu Level ▶▶
Use <↑> or <↓> to select a device, then press <+> to move it up, or <-> to move it down the list. Press <Esc> to exit this menu.
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

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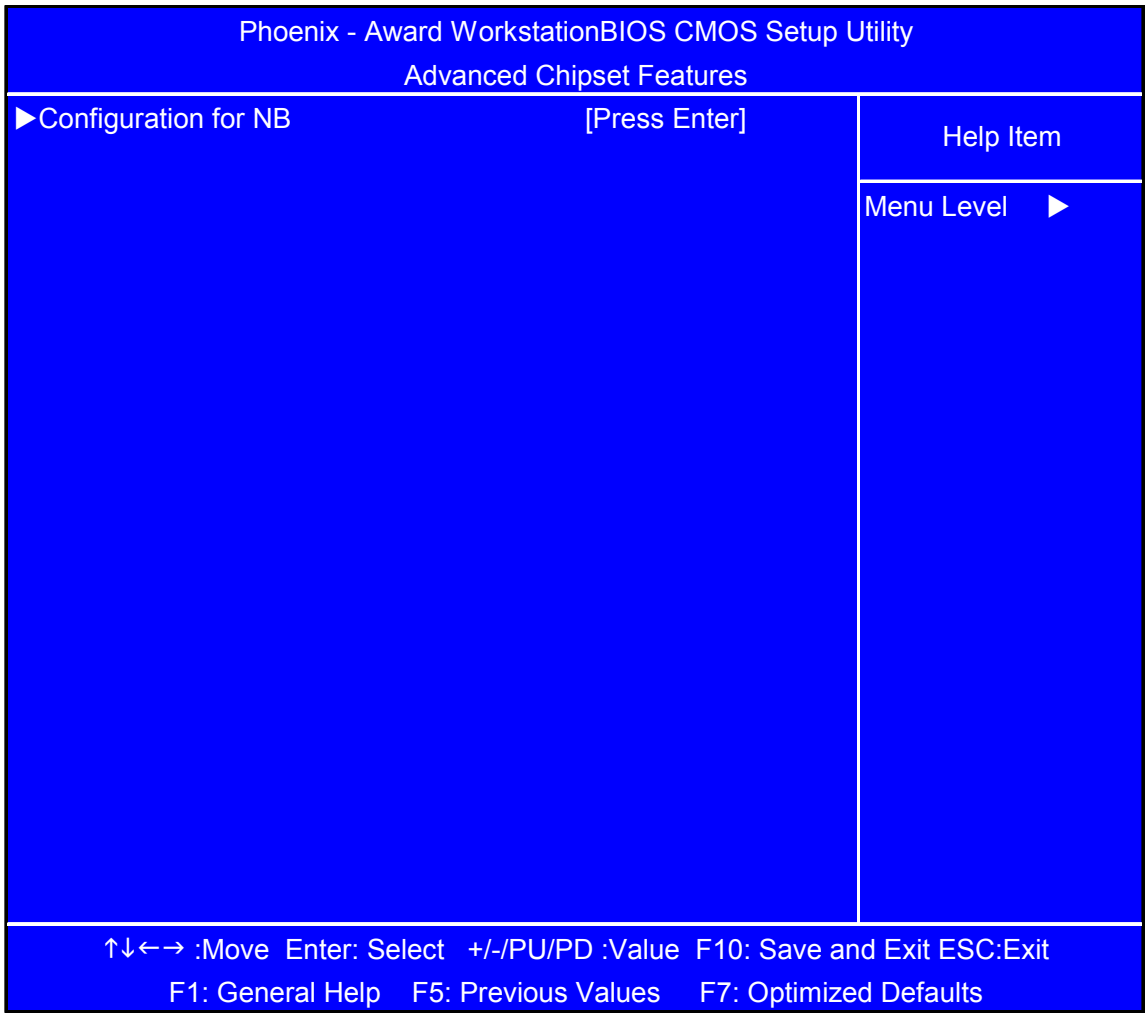
Advanced Chipset Features

These items define critical timing parameters of the main board. You should set these items for their default values unless you are very familiar with the technical specification of your system hardware. If you change the values incorrectly, you may introduce fatal errors or recurring instability into your system.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
Advanced Chipset Features
▶Configuration for NB
[Press Enter]
Help Item
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

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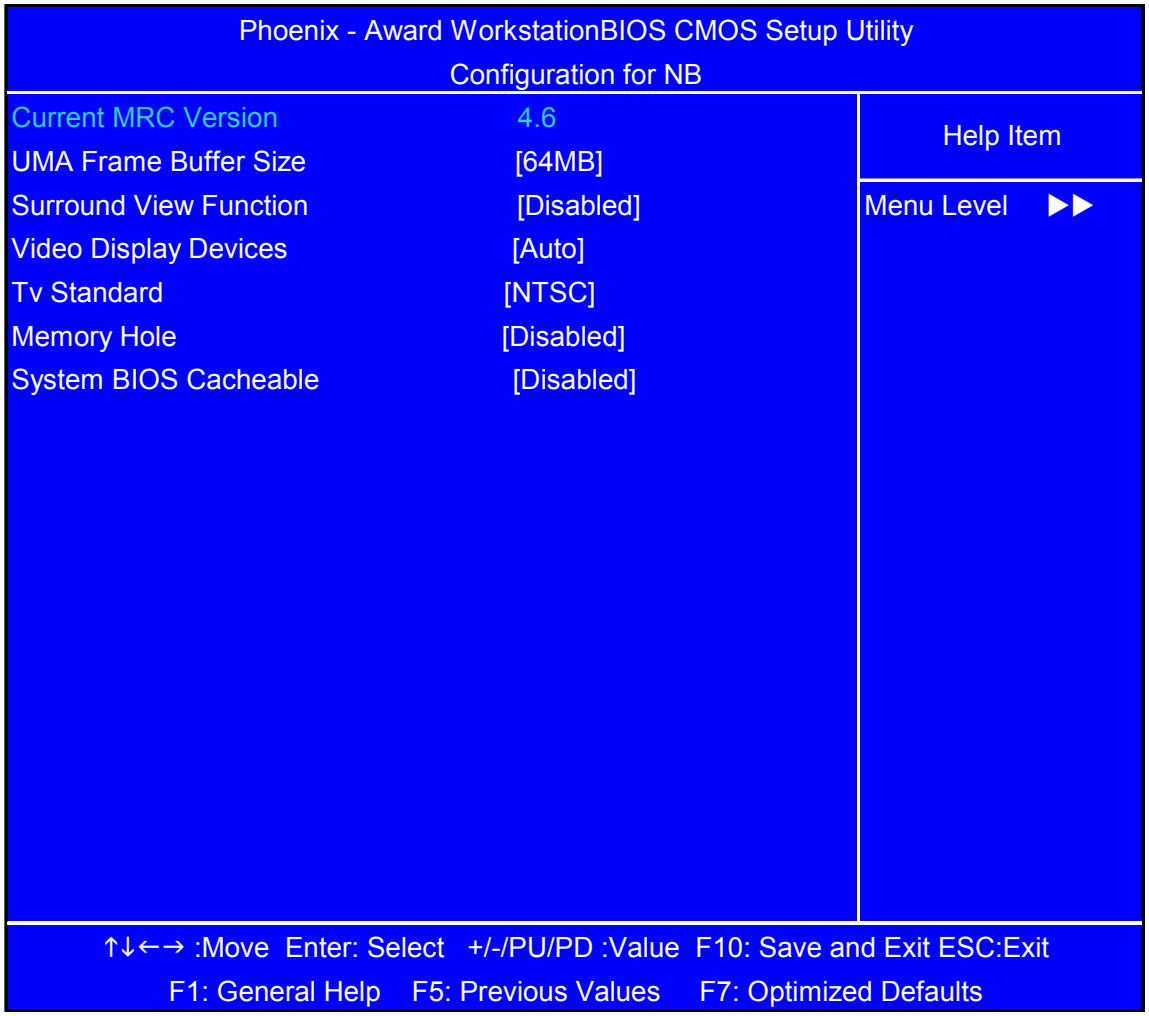
Configuration for NB (North Bridge)

Scroll to this item and press **ENTER** to enter the sub-menu on next page.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
Configuration for NB
Current MRC Version 4.6
UMA Frame Buffer Size [64MB]
Surround View Function [Disabled]
Video Display Devices [Auto]
Tv Standard [NTSC]
Memory Hole [Disabled]
System BIOS Cacheable [Disabled]
Help Item
Menu Level ▶▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

Current MRC Version

Displays the current MRC Version.

UMA Frame Buffer Size

This option controls the amount of system memory that is allocated to the integrated graphics processor when the system boots up.

Video Display Devices

This option checks video connections. The choices are Automatic, S-Video, composite and SCART.

TV Standard

This option determines TV signal transmission.

Memory Hole

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that use this area of system memory need to state their memory requirements.

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System BIOS Cacheable

Selecting [Enabled] allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The default setting is [Disabled].

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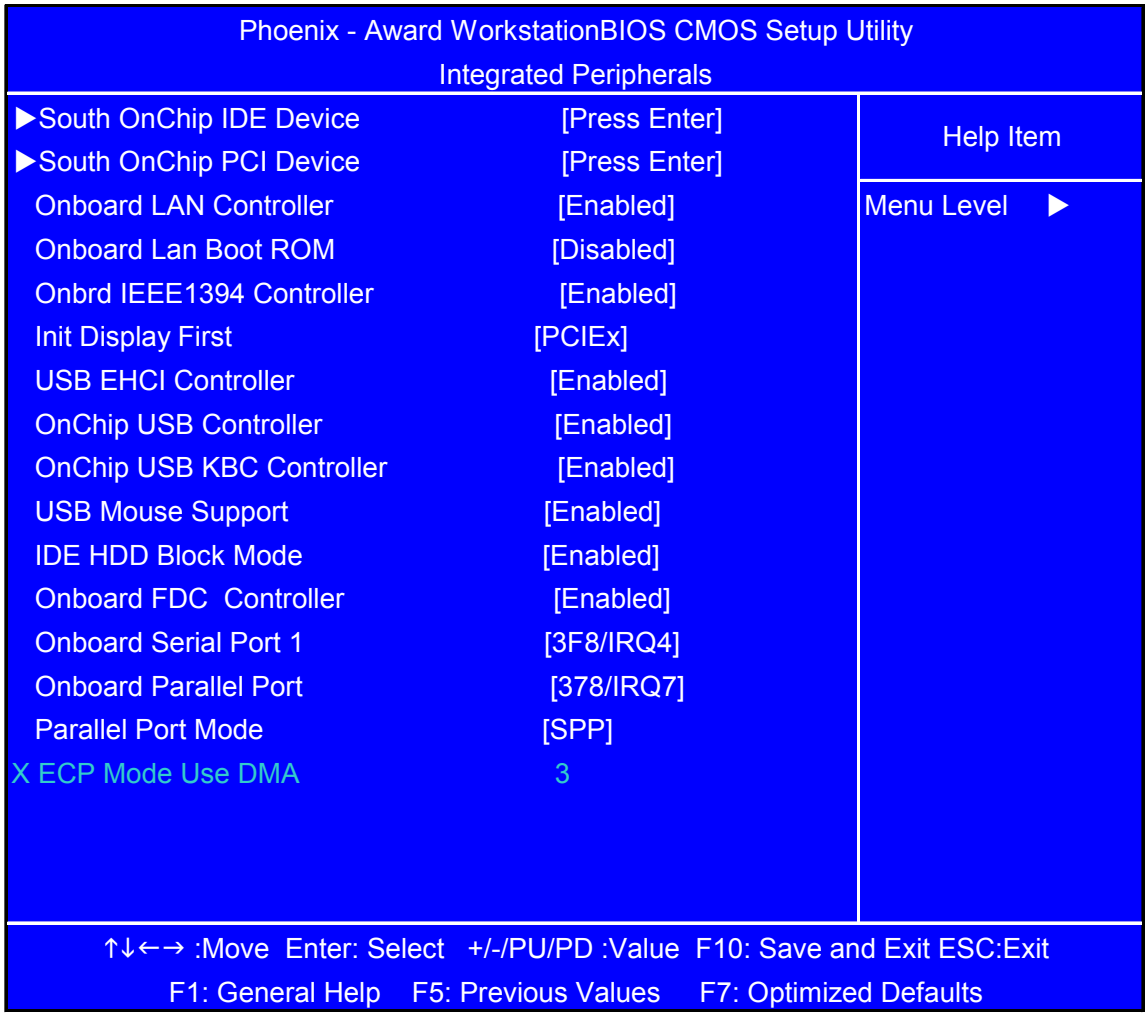
Integrated Peripherals


Phoenix - Award WorkstationBIOS CMOS Setup Utility
Integrated Peripherals
▶South OnChip IDE Device [Press Enter]
▶South OnChip PCI Device [Press Enter]
Onboard LAN Controller [Enabled]
Onboard Lan Boot ROM [Disabled]
Onbrd IEEE1394 Controller [Enabled]
Init Display First [PCIEx]
USB EHCI Controller [Enabled]
OnChip USB Controller [Enabled]
OnChip USB KBC Controller [Enabled]
USB Mouse Support [Enabled]
IDE HDD Block Mode [Enabled]
Onboard FDC Controller [Enabled]
Onboard Serial Port 1 [3F8/IRQ4]
Onboard Parallel Port [378/IRQ7]
Parallel Port Mode [SPP]
X ECP Mode Use DMA 3
Help Item
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

Onboard LAN Controller

This item allows users to enable or disable the onboard LAN Controller function.

Onboard LAN Boot ROM (Disabled)

Use this item to enable or disable the booting from the onboard LAN or a network add-on card with a remote boot ROM installed.

Onboard IEEE 1394 Controller (Enabled)

Use this item to enable or disable the onboard VIA 1394 device.

Init Display First

Enables or disables the bus PCI Slot or Onboard/AGP.

USB EHCI Controller

Enables or disables the Universal Serial Bus (USB) controller and Enhanced Host Controller Interface.

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OnChip USB Controller

Enables or disables the Universal Serial Bus (USB) controller and any USB peripherals present.

OnChip USB KBC Controller

Enables or disables the Universal Serial Bus (USB) controller and USB keyboard if present.

USB Mouse Support

You can enable this item if you want to use a mouse connected through the USB port in a legacy operating system (such as DOS) that does not support Plug and Play.

IDE HDD Block Mode

Enable this field if the IDE hard drive supports block mode. Block mode enables BIOS to automatically detect the optimal number of block read and writes per sector that the drive can support and improves the speed of access to IDE devices.

Onboard FDC Controller

If your system has a floppy disk controller (FDC) installed on the system board and you want to use it, you can select Enabled. If you install an add-in FDC or the system has no floppy drive, select Disabled in this field.

Onboard Serial Port 1 (3F8/IRQ4)

This item allows users to manually set the address for serial port 1.

Onboard Parallel Port (378/IRQ7)

Use this item to enable or disable the onboard parallel port and to assign a port address.

Parallel Port Mode (SPP)

Use this item to set the parallel port mode. You can select SPP (Standard Parallel Port), ECP (Extended Capabilities Port), EPP (Enhanced Parallel Port), or EPP & ECP.

ECP Mode Use DMA

When the onboard parallel port is set for ECP mode, the parallel port can use DMA3 or DMA1.

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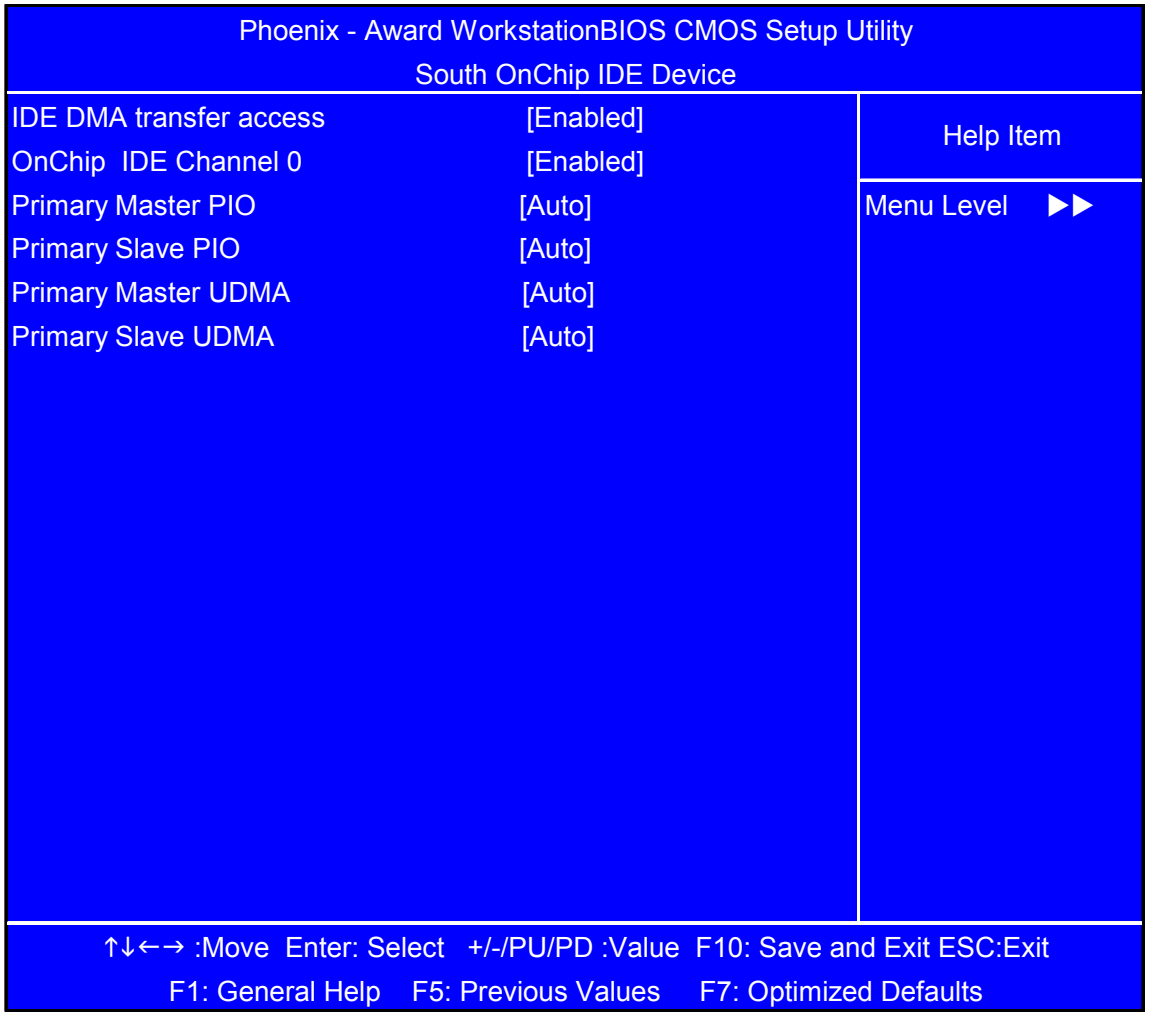
South OnChip IDE Device

Scroll to this item and press **Enter** to enter the sub-menu shown as below.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
South OnChip IDE Device
IDE DMA transfer access [Enabled]
OnChip IDE Channel 0 [Enabled]
Primary Master PIO [Auto]
Primary Slave PIO [Auto]
Primary Master UDMA [Auto]
Primary Slave UDMA [Auto]
Help Item
Menu Level ▶▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

IDE DMA Transfer Access

This item allows you to enable the transfer access of the IDE DMA.

OnChip IDE Channel

Select Enabled to activate IDE channel.

IDE Primary/Secondary Master/Slave PIO

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices. Choose Auto to let the system auto detect which PIO mode is optimal, or select a PIO mode from zero to four.

IDE Primary/Secondary Master/Slave UltraDMA

This main board supports UltraDMA technology, which provides faster access to IDE devices. If you install a device that supports UltraDMA, you can change the item on this list to Auto. You may have to install the UltraDMA driver supplied with this main board in order to use an UltraDMA device.

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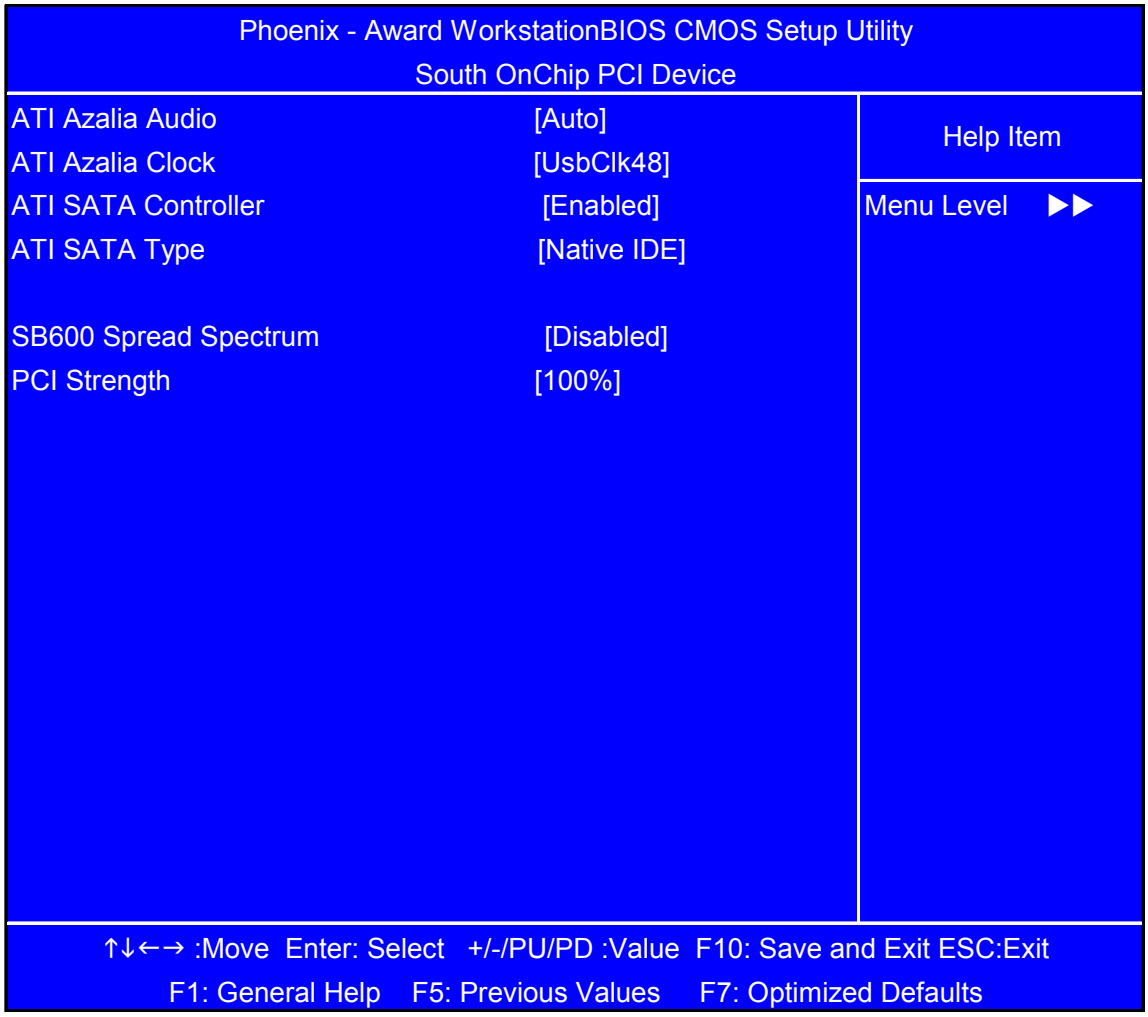
South OnChip PCI Device

Scroll to this item and press **Enter** to enter the sub-menu shown as below.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
South OnChip PCI Device
ATI Azalia Audio [Auto]
ATI Azalia Clock [UsbClk48]
ATI SATA Controller [Enabled]
ATI SATA Type [Native IDE]
SB600 Spread Spectrum [Disabled]
PCI Strength [100%]
Help Item
Menu Level ▶▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

ATI Azalia Audio

ATI Azalia Audio provides superior Audio Onboard, negating the need for 3rd party audio cards. The default setting is [Auto] detect.

ATI Azalia Clock

This item sets the PCI device clock speed for the South Board. The default is [UsbClk48].

ATI SATA Controller

This item appears in the BIOS of motherboards with a secondary Serial ATA controller (separate from the motherboard chipset). When enabled, the secondary Serial ATA controller will function normally. Serial ATA devices connected to it will be accessible to the system. When disabled, the secondary Serial ATA controller will be disabled. Serial ATA devices connected to it will not be accessible to the system.

ATI SATA Type

This item sets the SATA Cable Type in use. The default is [Native IDE].

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SB600 Spread Spectrum

Enabling spread spectrum can significantly reduce the EMI (ElectroMagnetic Interference) generated by the south bridge. For maximum system stability and performance this settings should remain at the default setting [Disabled].

PCI Strength

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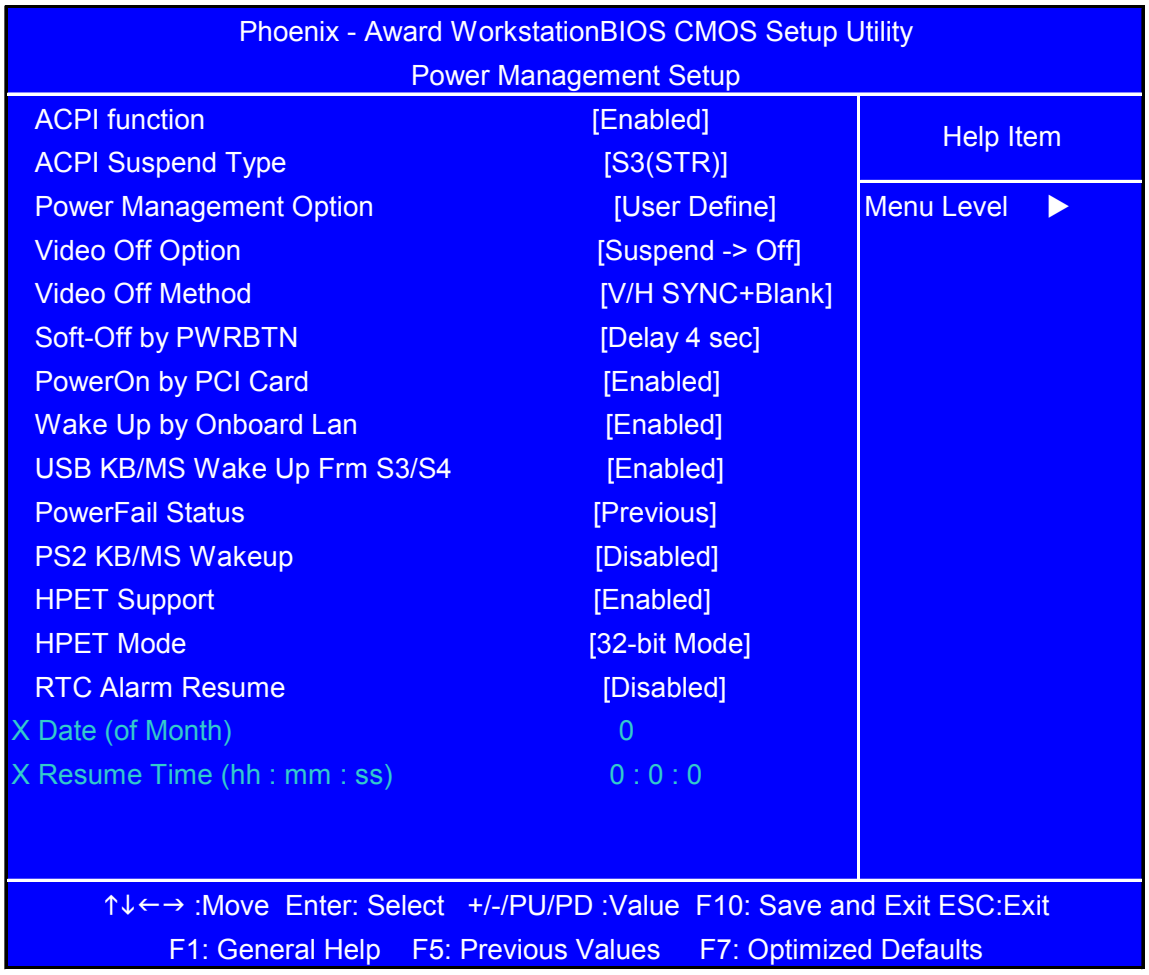
Power Management Setup

The system has various power-saving modes including powering down the hard disk, turning off the video, suspending to RAM, and software power down that allows the system to be automatically resumed by certain events.

The power-saving modes can be controlled by time-outs. If the system is inactive for a while, the time-outs begin counting. If the inactivity continues so that the time-out period elapses, the system enters a power-saving mode. If any item in the list of Reload Global Timer Events is Enabled, then any activity on that item will reset the time-out counters to zero.

If the system is suspended or has been powered down by software, it can be resumed by a wake up call that is generated by incoming traffic to a modern, a LAN card, a PCI card, or a fixed alarm on the system real-time clock.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
Power Management Setup
ACPI function [Enabled]
ACPI Suspend Type [S3(STR)]
Power Management Option [User Define]
Video Off Option [Suspend -> Off]
Video Off Method [V/H SYNC+Blank]
Soft-Off by PWRBTN [Delay 4 sec]
PowerOn by PCI Card [Enabled]
Wake Up by Onboard Lan [Enabled]
USB KB/MS Wake Up Frm S3/S4 [Enabled]
PowerFail Status [Previous]
PS2 KB/MS Wakeup [Disabled]
HPET Support [Enabled]
HPET Mode [32-bit Mode]
RTC Alarm Resume [Disabled]
X Date (of Month) 0
X Resume Time (hh : mm : ss) 0 : 0 : 0
Help Item
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

ACPI Function

This item allows users to enable or disable the ACPI power management function.

ACPI Suspend Type

You can use this item to define how your system suspends.

Power Management Option

This item acts like a master switch for the power-saving modes and hard disk timeouts. If this item is set to Max Saving, power-saving modes occur after a short timeout. If this item is set to Min Saving, power-saving modes occur after a longer timeout. If the item is set to User Define, manually define timeouts for the power-saving modes.

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Video Off Option

This option defines if the video is powered down when the system is put into suspend mode.

Video Off Method

This item defines how the video is powered down to save power.

Soft-Off by PWRBTN

Under ACPI (Advanced Configuration and Power Management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake Up Alarms. This item lets you install a software power down that is controlled by the power button on your system. If the item is set for Instant-Off, then the power button causes a software power down. If the item is set for Delay four Sec., then you have to hold the power button down for four seconds to cause a software power down.

Power On By PCI Card

Enables PCI activity to wake up the system from a power-saving mode.

Wakeup BY Onboard LAN

Enables LAN activity to wake up the system from a power-saving mode.

USB KB/MS Wakeup Frm S3/S4

Enables USB keboard activity to wake up the system from a power-saving mode.

PowerFail Status

Determines how the system reboots after power failure.

PS/2 KB/MS Wakeup

Enables PS/2 keyboard or mouse activity to wake up the system from a power-saving mode.

HPET Support

Enable or disable support for the High Precision Event Timer (HPET).

HPET Mode

Select the HPET mode from the options provided.

RTC Alarm Resume

When set to Enabled, the Date and Resume Time fields become available. Set the date (day of the month), hour, minute and second to turn on the system. When set to 0 (zero) for the day of the month, the alarm will power on your system every day at the specified time.

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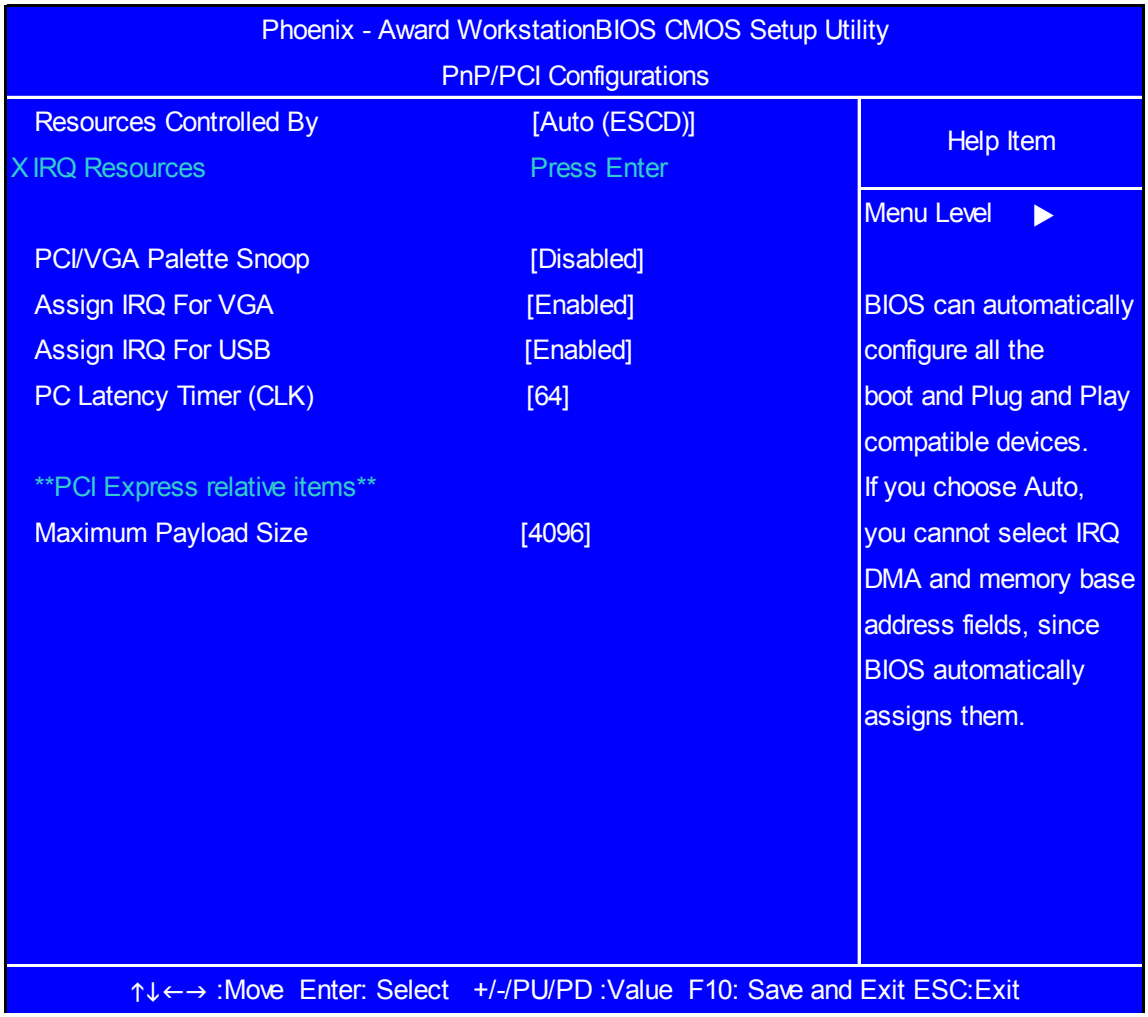
PnP/PCI Configurations

It configures how PnP (Plug and Play) and PCI expansion cards operate in your system. Both the ISA and PCI buses on the main board use system IRQs (interrupt requests) and DMAs (direct memory access). You must set up the IRQ and DMA assignments correctly through the PnP/PCI Configurations Setup Utility for the main board to work properly. Selecting PnP/PCI Configurations on the main program screen displays the menu below.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
PnP/PCI Configurations
Resources Controlled By
[Auto (ESCD)]
X IRQ Resources
Press Enter
PCI/VGA Palette Snoop
[Disabled]
Assign IRQ For VGA
[Enabled]
Assign IRQ For USB
[Enabled]
PC Latency Timer (CLK)
[64]
PCI Express relative items
Maximum Payload Size
[4096]
Help Item
Menu Level ▶
BIOS can automatically configure all the boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, since BIOS automatically assigns them.
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit

Resources Controlled By

The BIOS can automatically configure all the boot Plug and Play compatible devices. Auto (default) disables IRQ and DMA memory base address fields as they are automatically assigned.

PCI/VGA Palette Snoop

This item is designed to overcome problems that can be caused by some non-standard VGA cards. This board includes a built-in VGA system that does not require palette snooping. Default setting is [Disabled].

Assign IRQ For VGA

Enable or disable IRQ allocation for the graphics card.

Assign IRQ for USB

Enable or disable IRQ allocation for the USB (Universal Serial Bus).

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PCI Latency Timer (CLK)

This item controls how long a PCI device can hold the PCI bus before another device takes over. Setting the latency to longer periods enbles a PCI device to retain control of the bus longer before handing it over to another device.

Maximum Payload Size

This BIOS feature determines the maximum TLP (Transaction Layer Packet) payload size that can be supported by the motherboard chipset's PCI Express controller. The TLP payload size determines the amount of data transmitted within each data packet. When set to 4096, the motherboard chipset's PCI Express controller supports the maximum data payload of 4096 bytes within each TLP. This is the maximum payload size currently supported by the PCI Express protocol.

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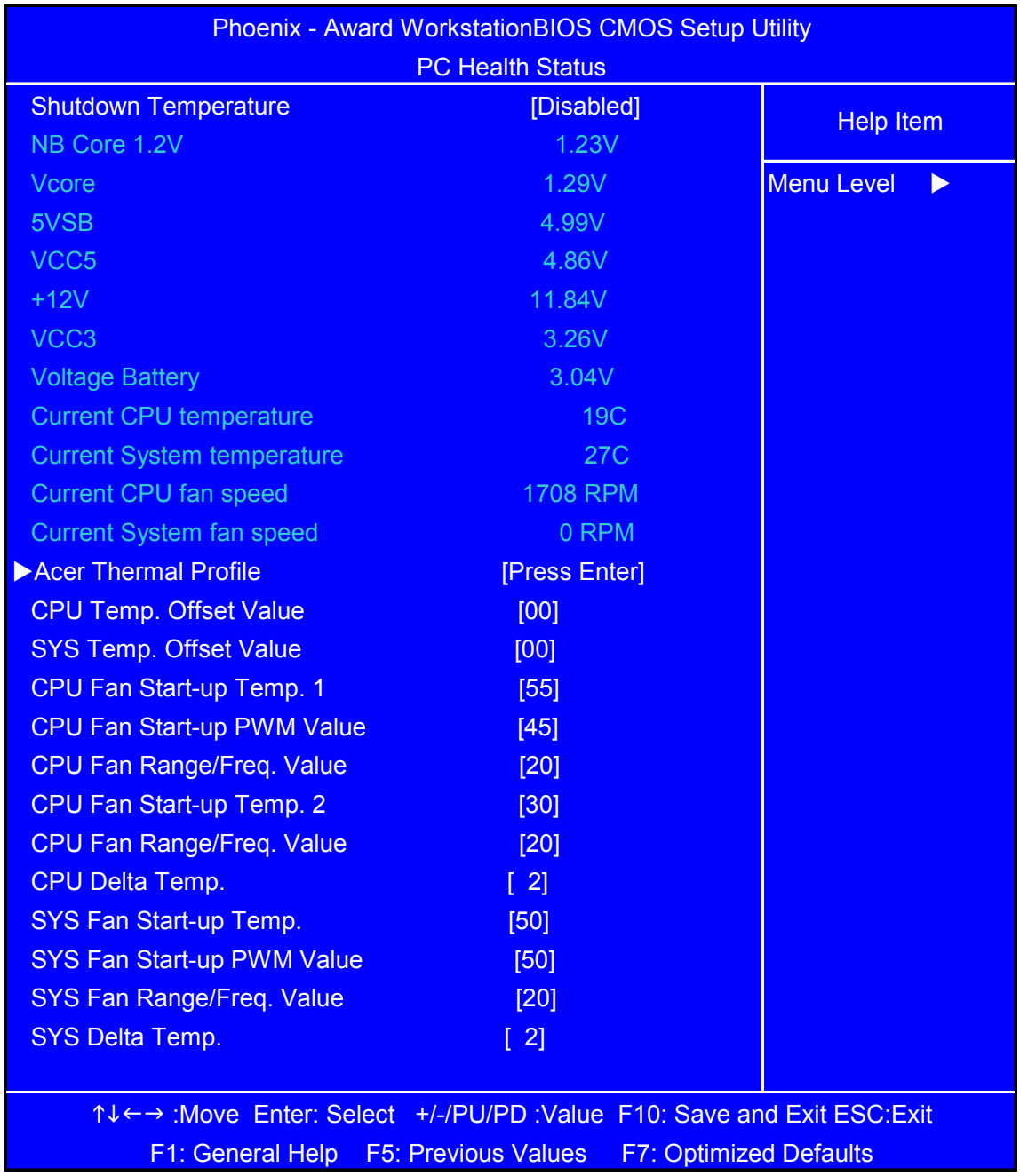
PC Health Status

On the main board that supports hardware monitoring, you can monitor the parameters of critical voltage, temperature and fan speed.


Phoenix - Award WorkstationBIOS CMOS Setup Utility
PC Health Status
Shutdown Temperature [Disabled]
NB Core 1.2V 1.23V
Vcore 1.29V
5VSB 4.99V
VCC5 4.86V
+12V 11.84V
VCC3 3.26V
Voltage Battery 3.04V
Current CPU temperature 19C
Current System temperature 27C
Current CPU fan speed 1708 RPM
Current System fan speed 0 RPM
▶Acer Thermal Profile [Press Enter]
CPU Temp. Offset Value [00]
SYS Temp. Offset Value [00]
CPU Fan Start-up Temp. 1 [55]
CPU Fan Start-up PWM Value [45]
CPU Fan Range/Freq. Value [20]
CPU Fan Start-up Temp. 2 [30]
CPU Fan Range/Freq. Value [20]
CPU Delta Temp. [2]
SYS Fan Start-up Temp. [50]
SYS Fan Start-up PWM Value [50]
SYS Fan Range/Freq. Value [20]
SYS Delta Temp. [2]
Help Item
Menu Level ▶
↑↓←→ :Move Enter: Select +/-/PU/PD :Value F10: Save and Exit ESC:Exit
F1: General Help F5: Previous Values F7: Optimized Defaults

Shut Down Temperature

Enables you to set the maximum temperature that the system can reach before powering down.

Component Status

The following items display the current status of various components.

- NB core 1.2V
- VCore
- 5VSB

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- VCC5
- +12V
- VCC3
- Voltage Battery
- Current CPU temperature
- Current System temperature
- Current CPU fan speed
- Current System fan speed

ACER Thermal Profile

Scroll to this item and press **Enter** to display the sub-menu items as shown below.

- CPU Temp. Offset Value
- SYS Temp. Offset Value
- CPU Fan Start-up Temp 1
- CPU Fan Start-up PWM Value
- CPU Fan Range/Freq. Value
- CPU Fan Start-up Temp 2
- CPU Fan Range/Freq. Value
- CPU Delta Temp.
- SYS Fan Start-up Temp.
- SYS Fan Start-up PWM Value
- SYS Fan Range/Freq. Value
- SYS Delta Temp.

Enter vaules as required to customize the ACER Thermal Profile.

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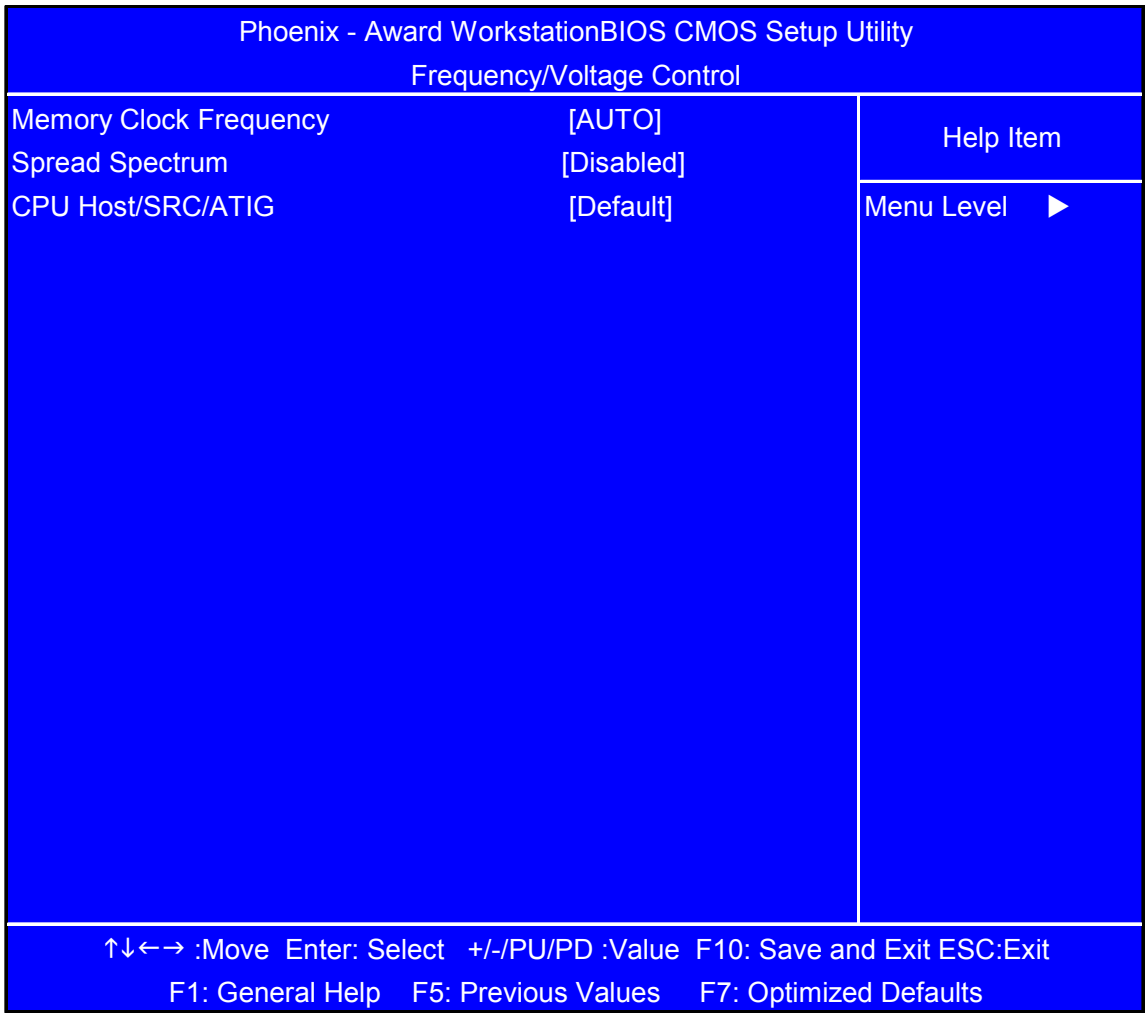
Frequency & Voltage Control

It enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the processor you have installed in your system.



Memory Clock Frequency

Spread Spectrum

If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

CPU Host/SRC/ATIG

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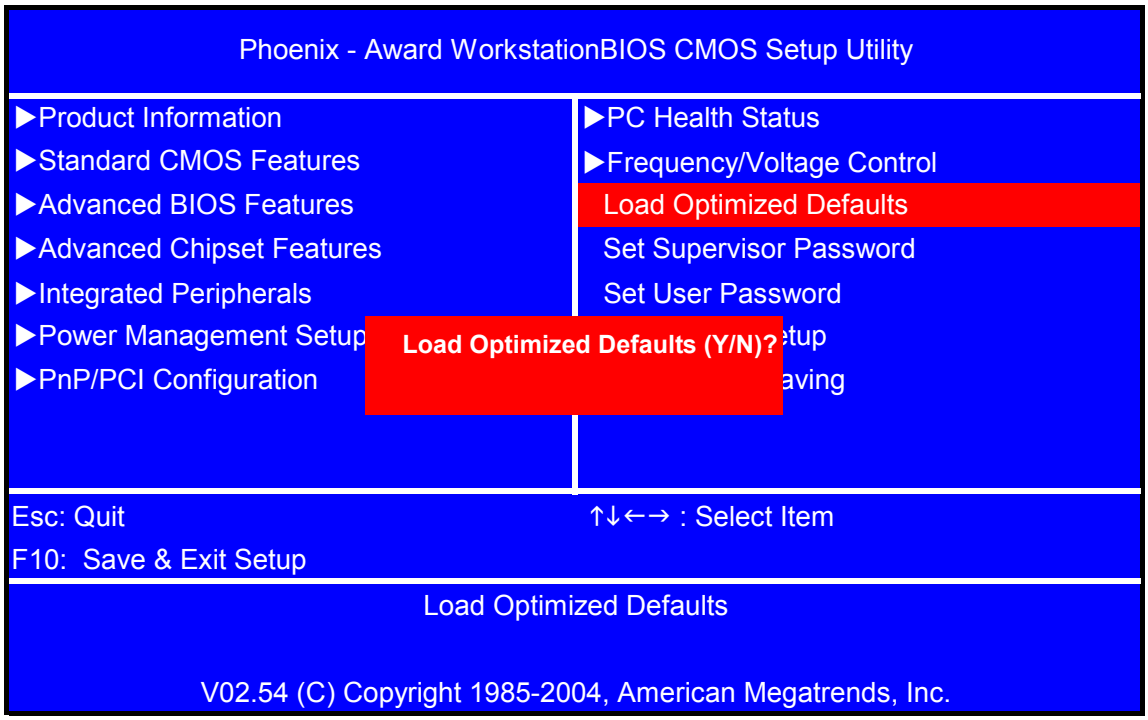
Load Optimized Defaults

This option opens a dialog box that lets you install optimized defaults for all appropriate items in the Setup Utility. Press **Y** and then **ENTER** to install the defaults. Press **N** and then **ENTER** to cancel without installing defaults.



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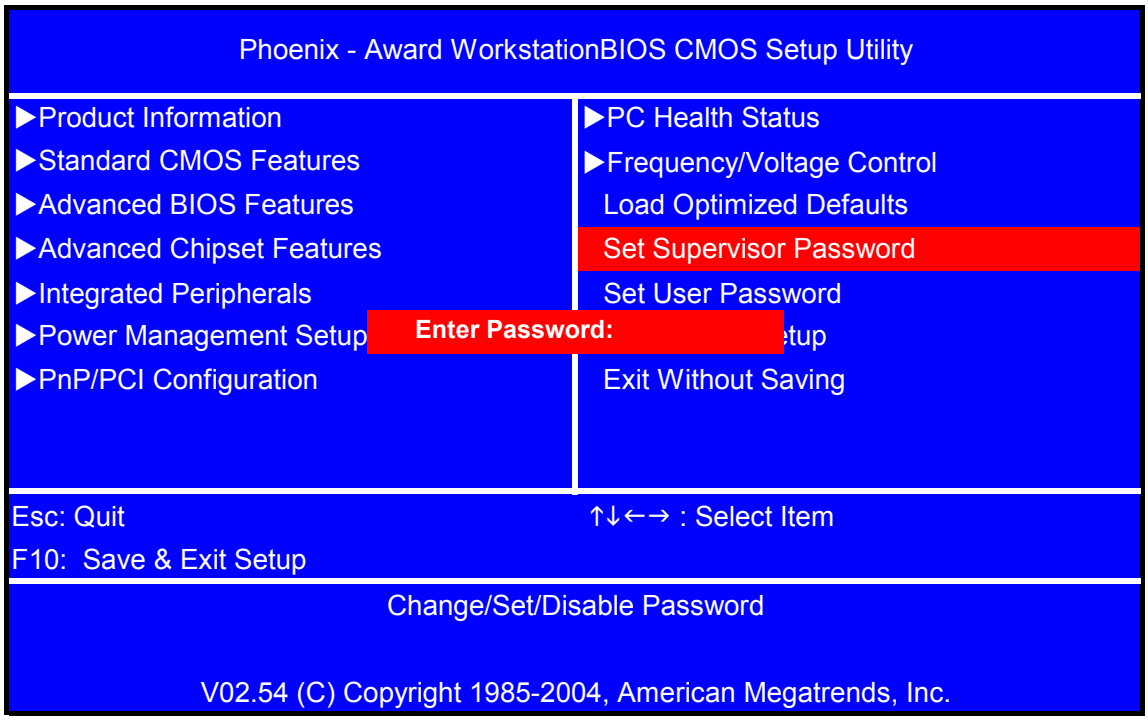
Set Supervisor Password

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.



Enter Password

Type the password, up to eight characters, and press **ENTER**. The password entered here overwrites any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press **ENTER**. You can press **ESC** to abort the selection.

To disable password, just press **ENTER** when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

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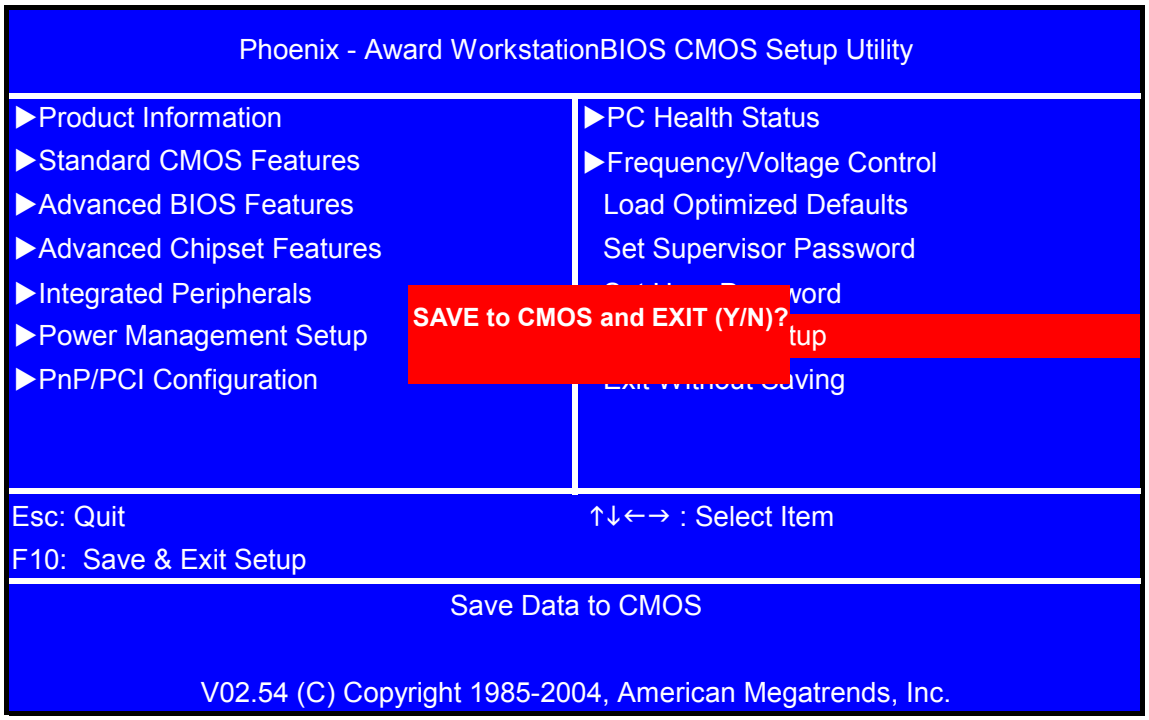
Save and Exit Setup

You can highlight this item and press **ENTER** to save the changes that you have made in the Setup Utility and exit the Setup Utility.



When the Save and Exit dialog box appears, press **(Y)** followed by **ENTER** to save and exit, or press **(N)** followed by **ENTER** to return to the main menu.

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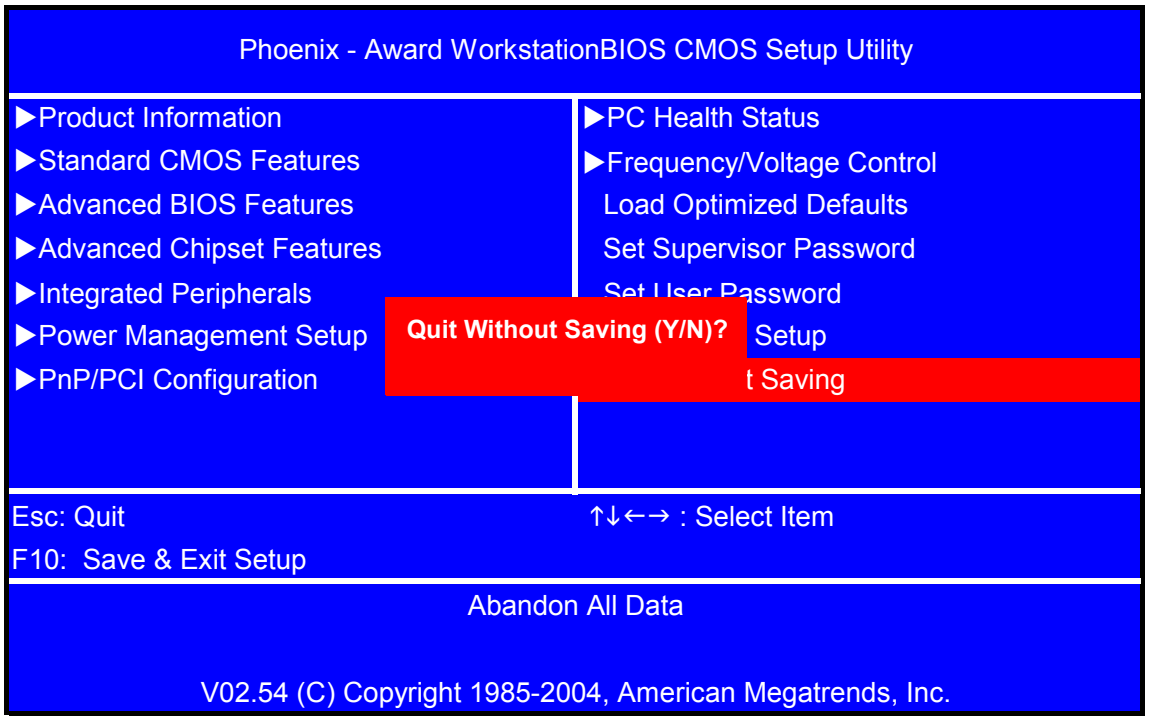
Exit without Saving

You can highlight this item and press **ENTER** to discard any changes that you have made in the Setup Utility and exit the Setup Utility.



When the Exit without Saving dialog box appears, press **(Y)** followed by **ENTER** to discard changes and exit, or press **(N) followed by ENTER** to return to the main menu.

Note: If you have made changes to settings that you do not want to save, choose the **Discard Changes and Exit** and press **(Y)** followed by **ENTER** to discard any changes you have made.

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Machine Disassembly and Replacement

General Information

This chapter contains step-by-step procedures on how to disassemble and reassemble the Aspire AM5610/ AM3610 for maintenance and troubleshooting. In the coming pages, the first part of the disassembly instruction is for Aspire AM5610 and the second part is for Aspire AM3610.

To disassemble the notebook, you need the tools below:

- Wrist ground strap and conductive mat for preventing electrostatic discharge
- Small Philips screw driver
- Flat head screw driver
- Hexagonal driver
- Tweezers

Note: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components. When you remove the stripe cover, please be careful not to scrape the cover.

Before You Begin

Before proceeding with the disassembly procedure, you have to make sure that:

- The system and all peripherals are powered off.
- The AC adaptor and all power and signal cables from the system are unplugged.

Note: There are several types of screws used to secure the main unit. The screws vary in length. Please refer to the screws table after the flowchart. Group the same type of screws together during service disassembling. Please also remember the screw location for each screw type. If you fasten the screws on the wrong location, the long screws may cause irrecoverable damage to the main board.

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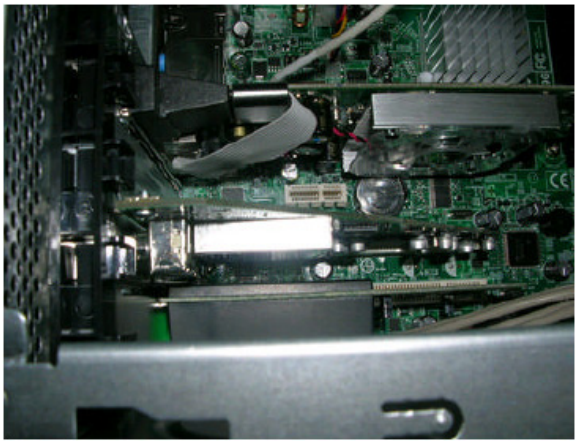
Aspire AM5610 Procedures

Use the following guides to disassemble and resassemble the AM5610 model.

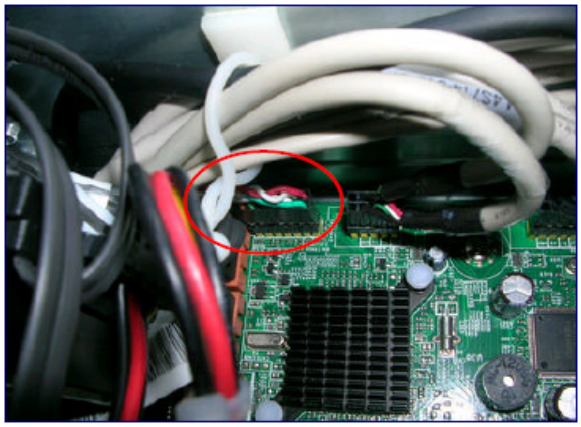
AM5610 Disassembly Procedure

1. Place the system unit on a flat, steady and nonskid surface.
2. Release the lock handle then slide the left cover out.

3. Detach the VGA, TV, and Modem cards.



4. Disconnect the front bezel LED cable



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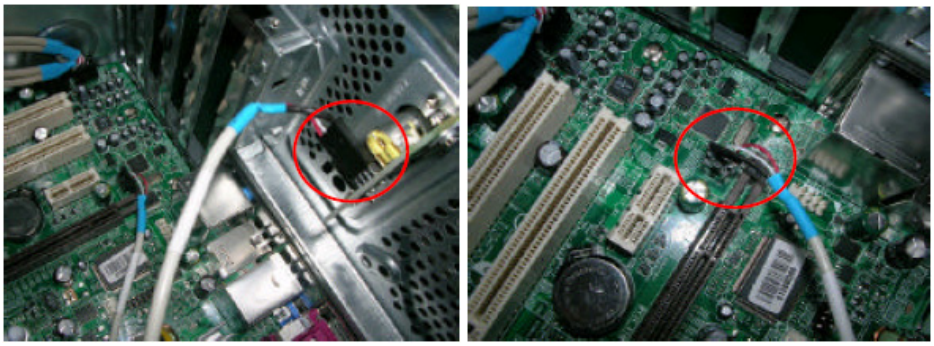
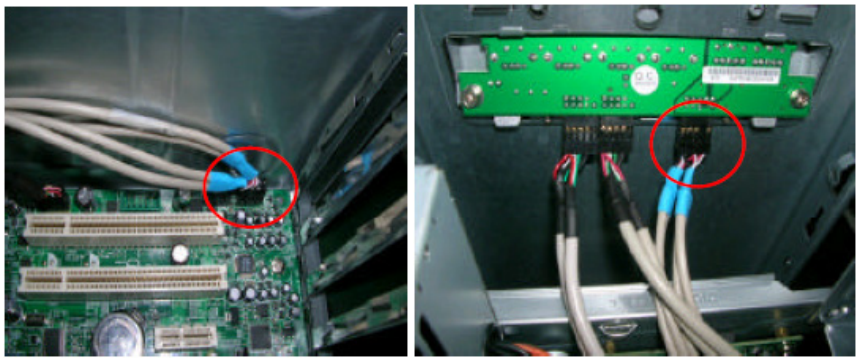
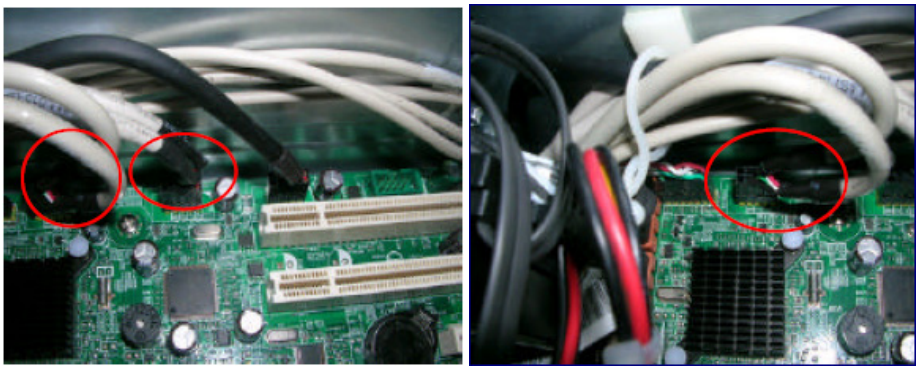
5. Disconnect the SPDIF cable.



6. Disconnect the audio cable.



7. Disconnect the USB cables.



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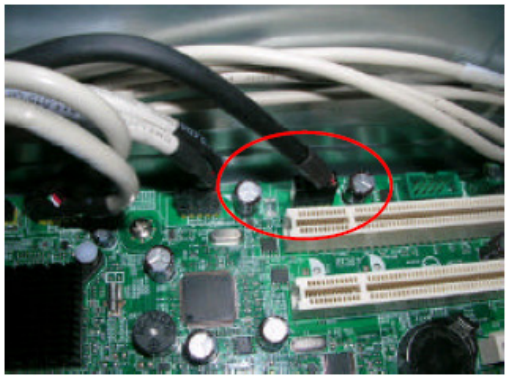
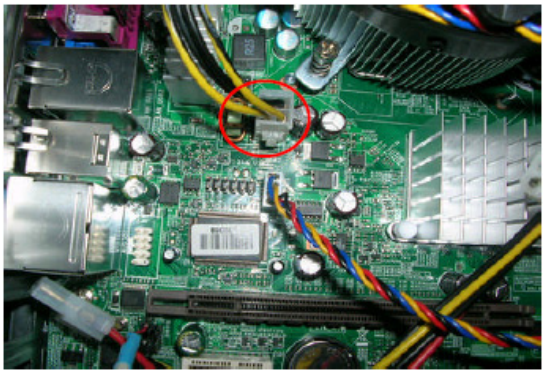
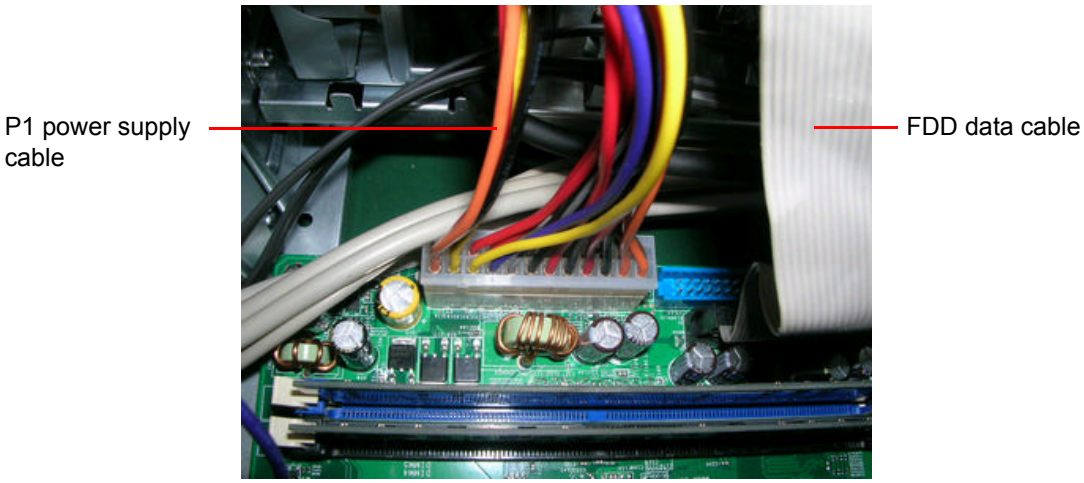
8. Disconnect the card read cable.



9. Disconnect the PA and PD power cable from the MB connector.



10. Disconnect the P1 power supply cable and FDD data cable.



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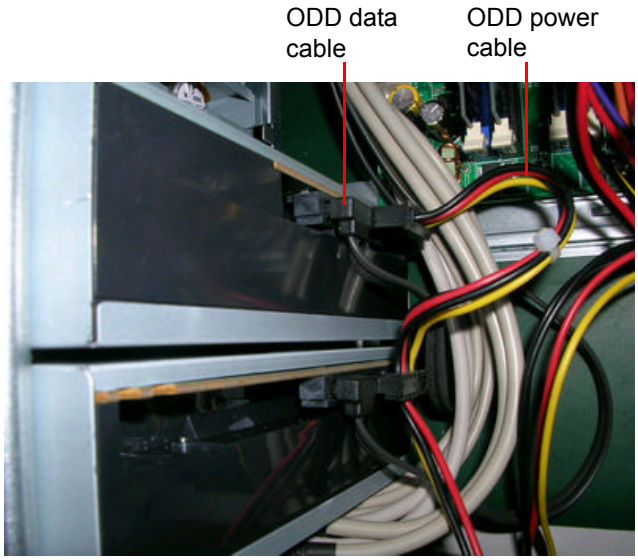
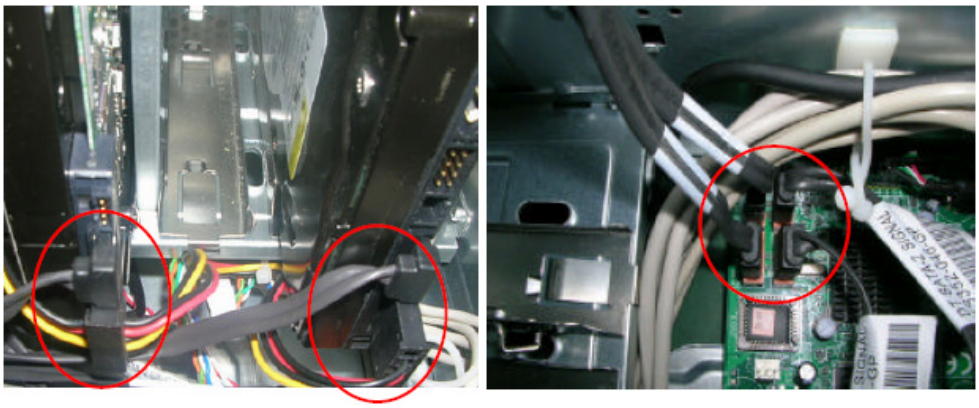
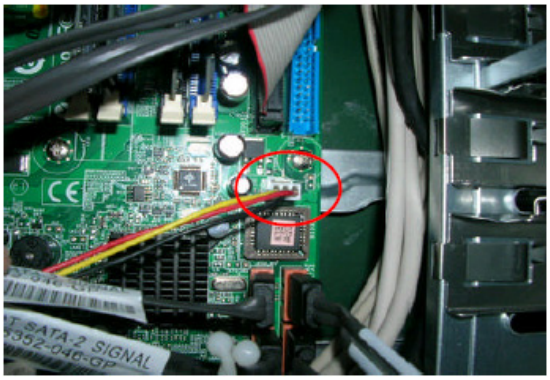
11. Disconnect the ODD power cable and the ODD data cable.



12. Disconnect the HDD power cable and the HDD data cable.



13. Disconnect the System Fan power cable from the MB connector.



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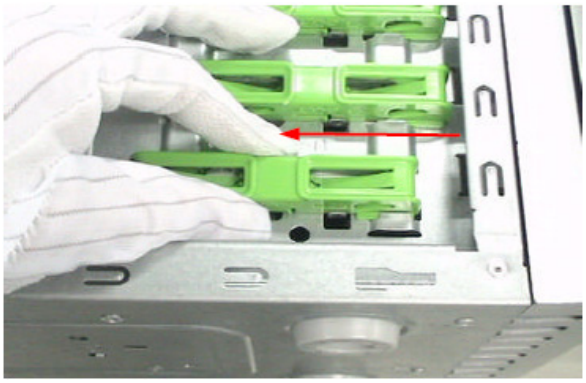
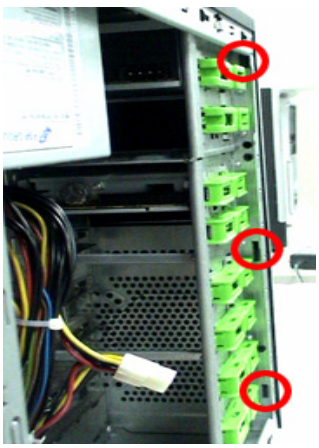
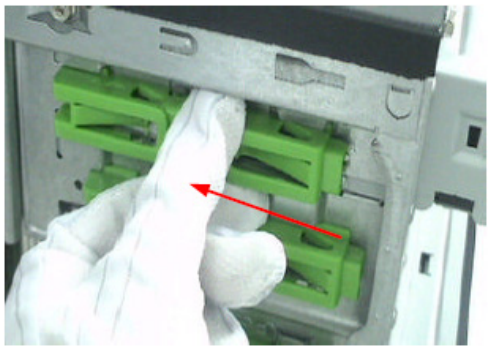
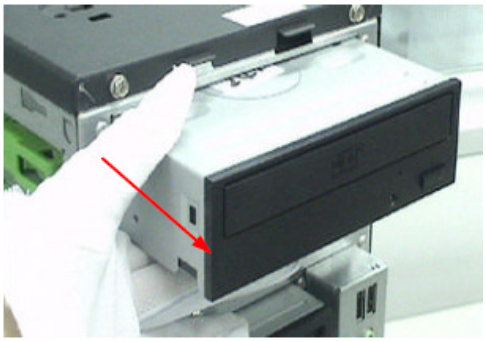
14. Slide the HDD holder as shown and remove the HDD from the chassis.



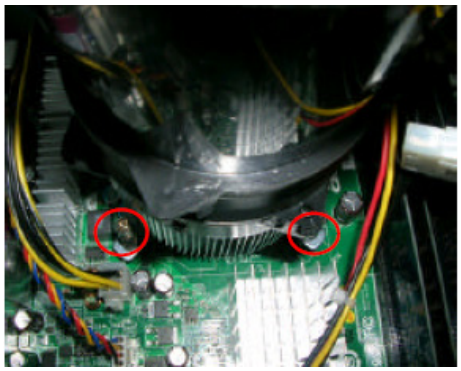
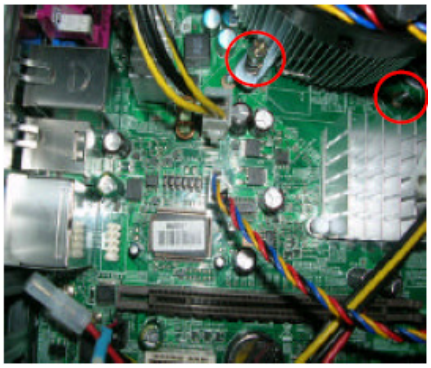
15. Release the three latches as shown and remove the front bezel.



16. Slide the ODD holder as shown and remove the ODD from the chassis.

17. Release the 4 screws from the CPU cooler and remove from the main board.

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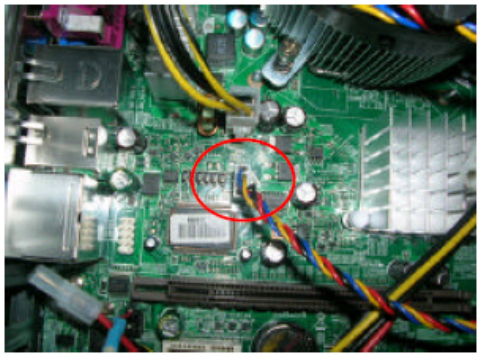
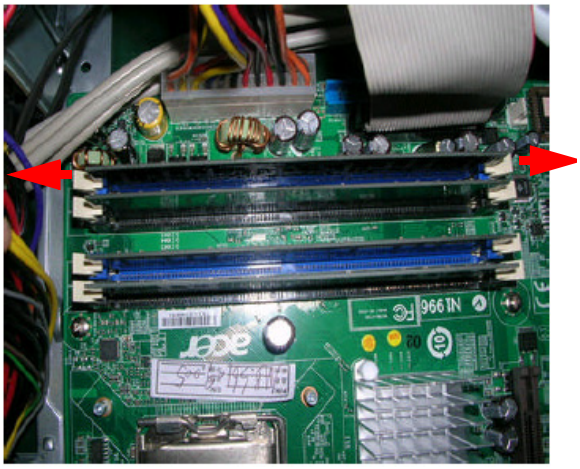
18. Disconnect the CPU Cooler power cable from the MB.



19. Push the two locking latches away from the memory unit at the same time to release the memory. Repeat as necessary to remove all memory.



20. Release the four screws fastening the system fan and remove from the chassis.

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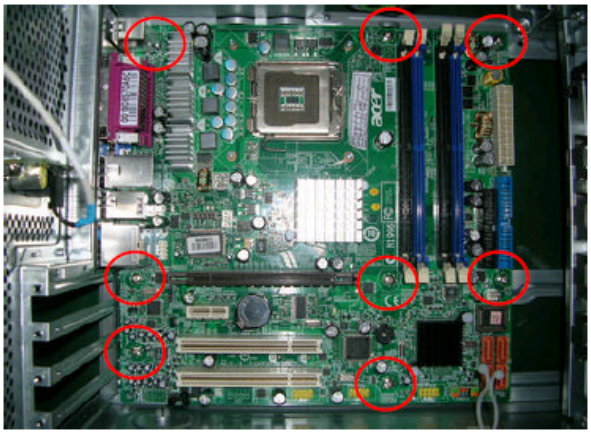
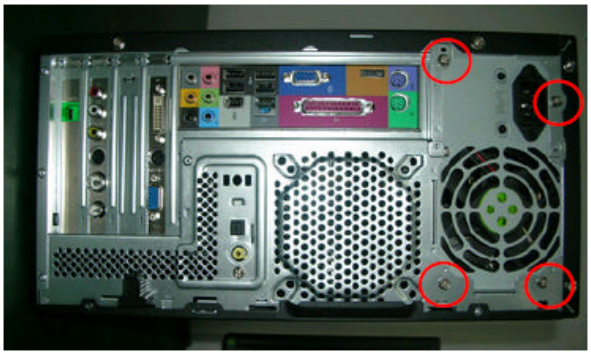
21. Push and release the CPU latch and remove the CPU from the motherboard.

22. Release the 8 screws marked below and remove the main board.



23. Release the four screws marked below and remove the system power supply from the chassis.



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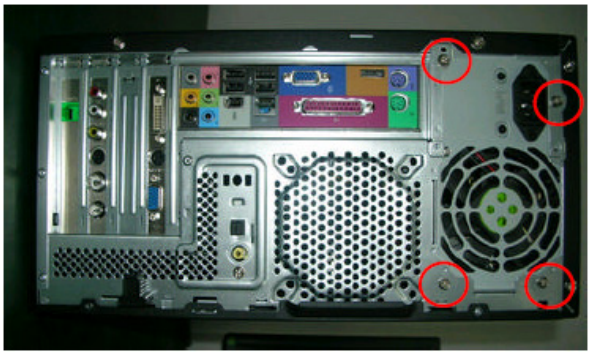
AM5610 Reassembly Procedure

1. Insert the system power supply in to the chassis and secure the four screws marked below.

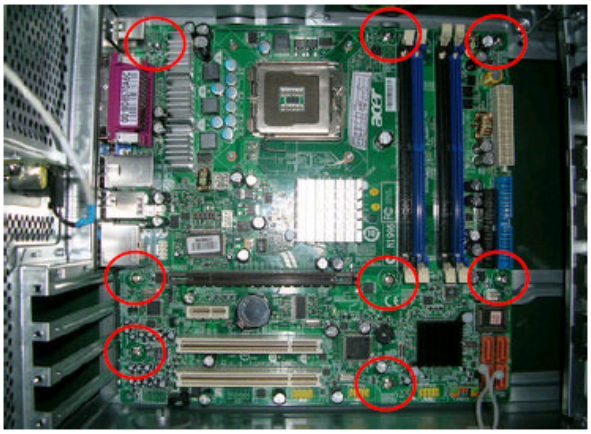


IMPORTANT:FSP and LITEON power supply cabling differ due to size constraints. For FSP power supplies, use a power cable clip to secure the 12V cable. For LITEON power supplies, use a non-cable clip to secure the 12V cable.

FSP Power Supply

LITEON Power Supply

2. Insert the main board and secure the 8 screws marked below.



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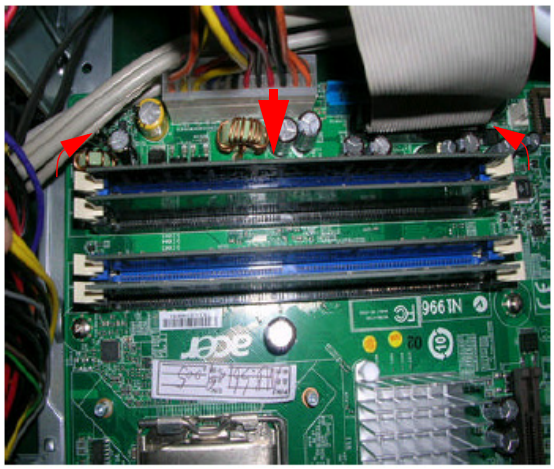
3. Insert the CPU in to the motherboard. Close the CPU latch.

4. Insert the System Fan in to the chassis as secure the 4 screws as shown.

5. Insert the memory into the slot, taking care to allign the locating lug. Push down as shown until the securing latches click into place. Repeat for all memory modules.



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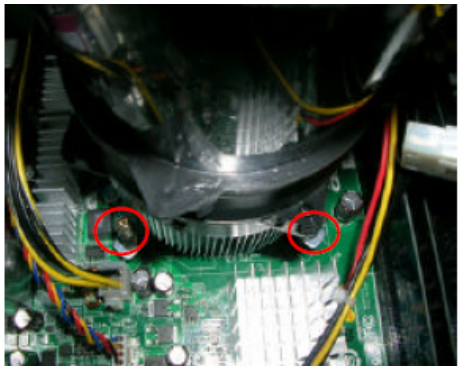
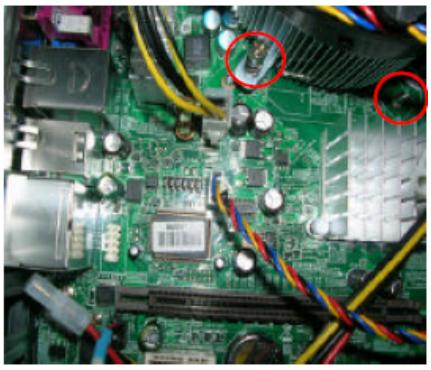
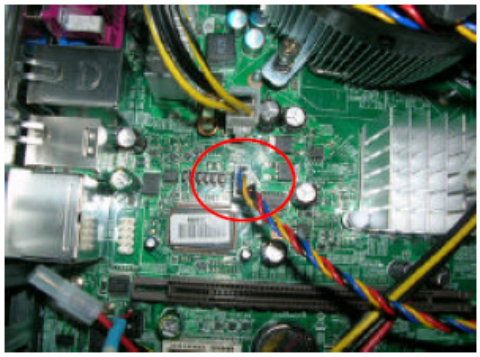
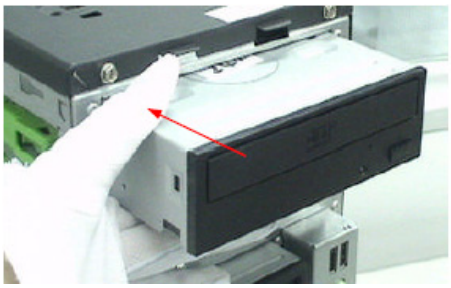
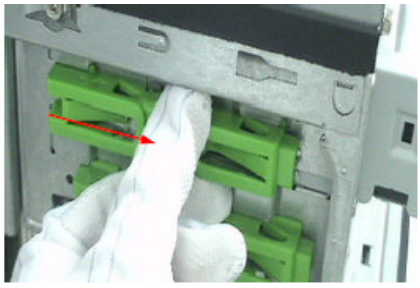
6. Insert the CPU Cooler in to the mainboard and secure the 4 screws as shown.

7. Connect the CPU Cooler power cable to the MB.



8. Insert the ODD in to the chassis and slide the ODD holder as shown to lock it in place.

9. Insert the FDD in to the chassis and slide the FDD holder as shown to lock it in place.

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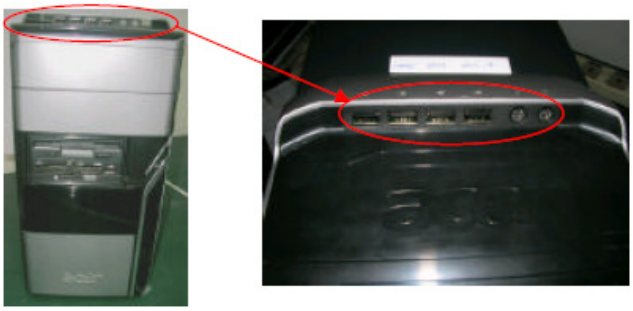
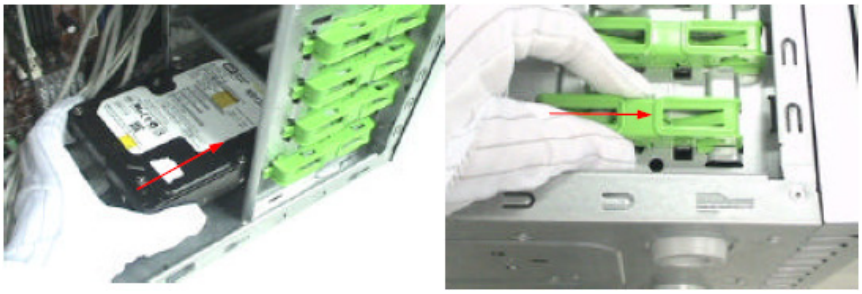
10. Attach the front bezel as shown. Ensure that access to the USB ports is not restricted.

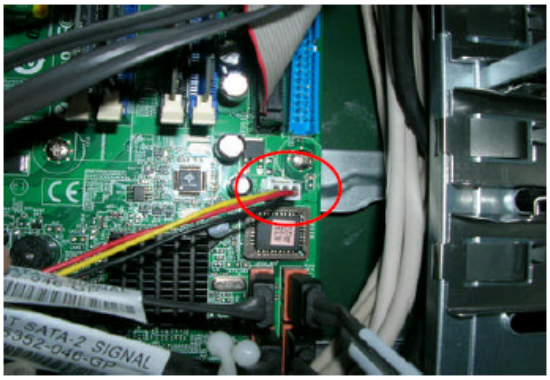


11. Insert the SPDIF into the chassis. Ensure that the unit locates correctly as shown.

12. Insert the HDD in to the chassis and slide the HDD holder as shown to lock it in place.



13. Connect the System Fan power cable in to the MB connector.



Note: When reassembling the System Fan, the Fan cable should be fixed in the clip together with the CPU+12V cable.

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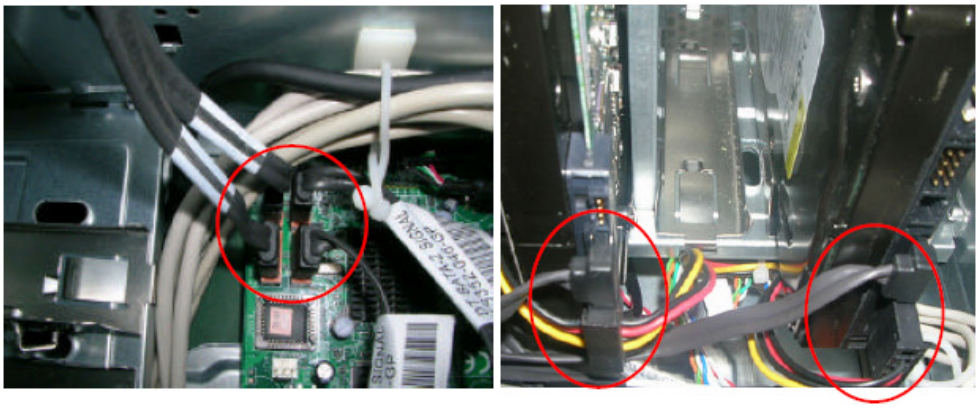
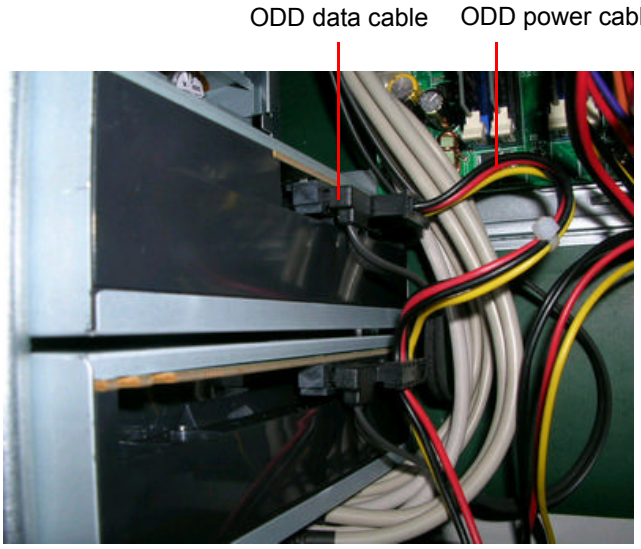
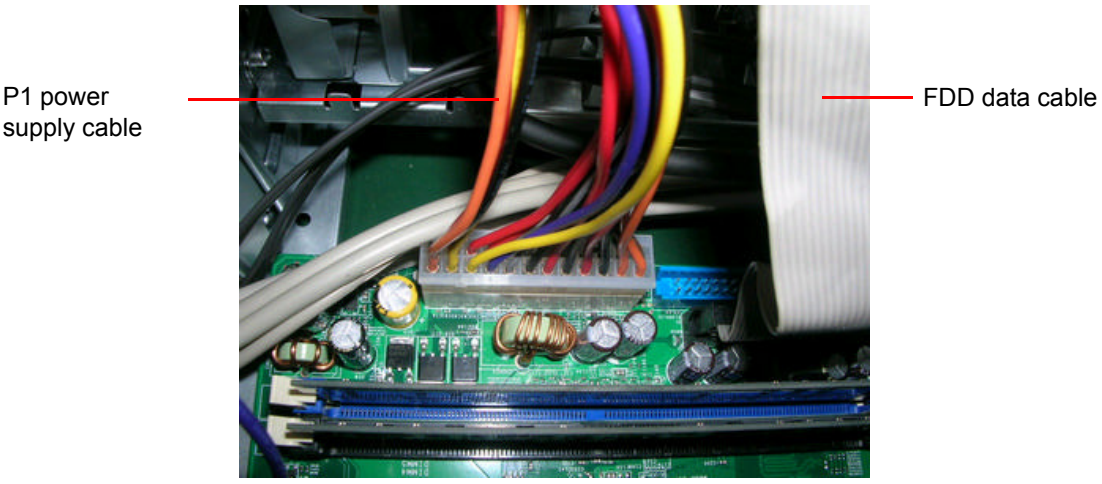
14. Connect the the HDD data cable and HDD power cable.



15. Connect the ODD data cable and the ODD power cable.



16. Connect the FDD data cable and P1 power supply cable.



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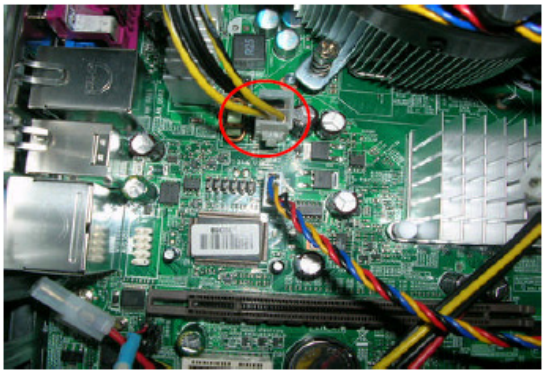
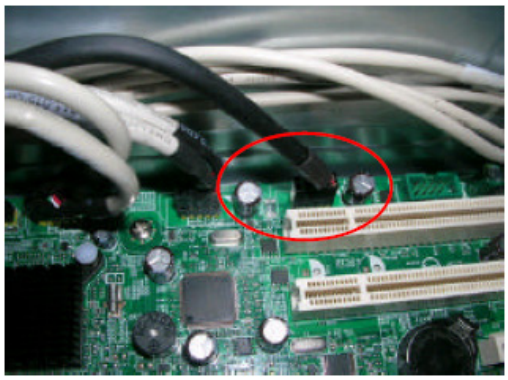
17. Connect the PA and PD power cable to the MB connector.



18. Connect the card read cable.



Note: When reassembling the Card Reader SKUs, the front I/O only supports 2 USB ports. The USB cable from the DB is connected to USB Port1 on the MB and the Card Reader USB cable is connected to USB Port2. See the table below for your reference:

SKU Status	USB Port1	USB Port2	USB Port3
W/I Card Reader	USB cable1	CR USB cable	USB cable2
W/O Card Reader	USB cable1	USB cable2	N/A

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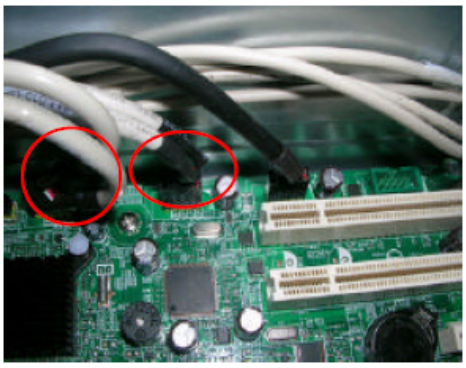
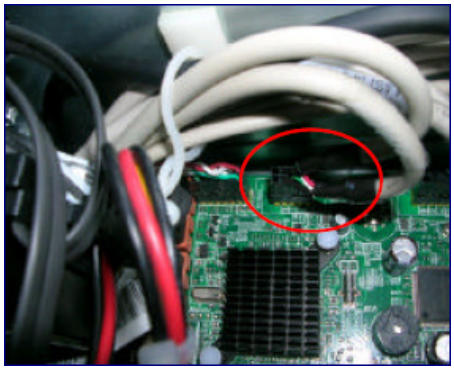
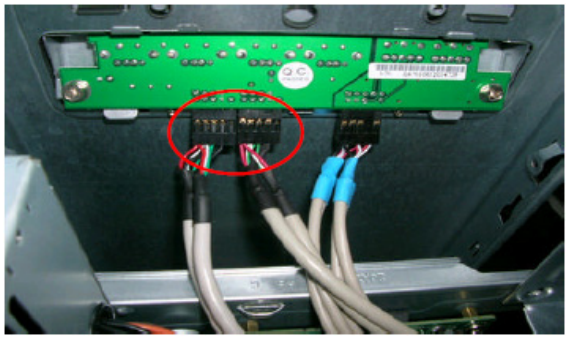
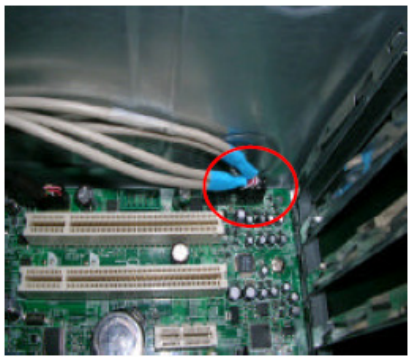
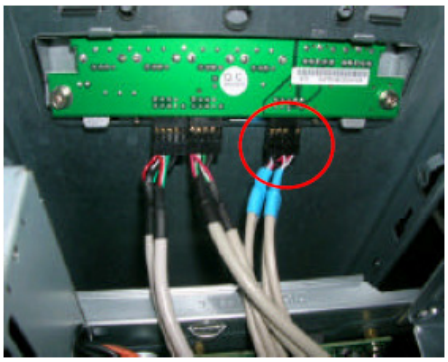
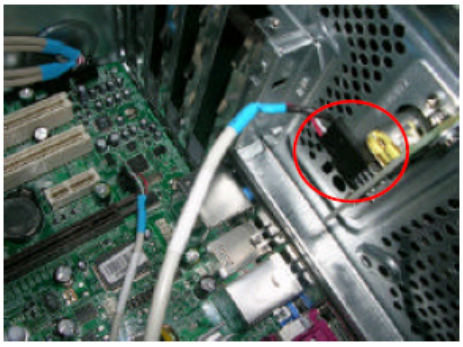
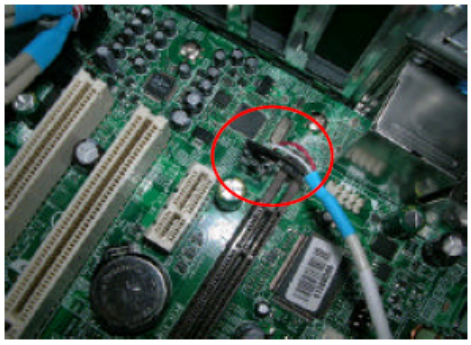
19. Connect the USB cables.

20. Connect the audio cable.

21. Connect the SPDIF cable.

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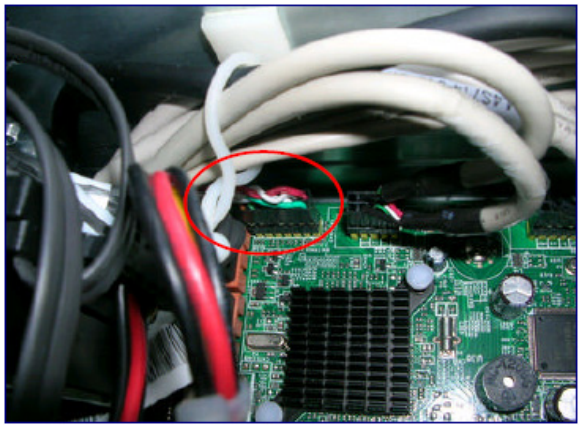
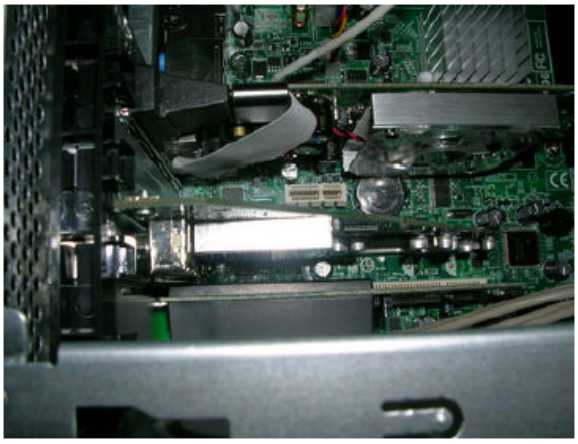
22. Connect the front bezel LED cable.



23. Connect the VGA/TV, and Modem cards.



24. Slide the left cover in and secure the lock handle.

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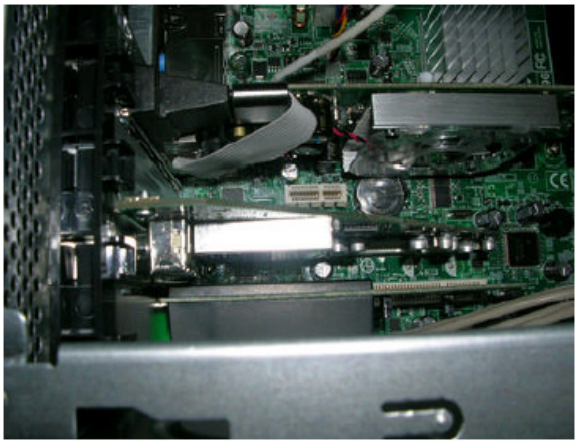
Aspire AM3610 Procedures

Use the following guides to disassemble and resassemble the AM3610 model.

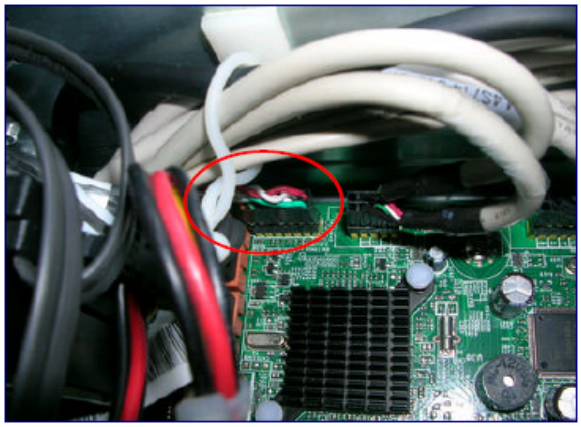
AM3610 Disassembly Procedure

1. Place the system unit on a flat, steady and nonskid surface.
2. Release the lock handle then slide the left cover out.

3. Detach the VGA, TV, and Modem cards.



4. Disconnect the front bezel LED cable



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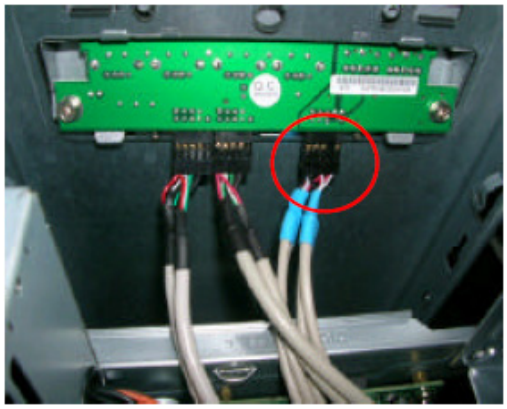
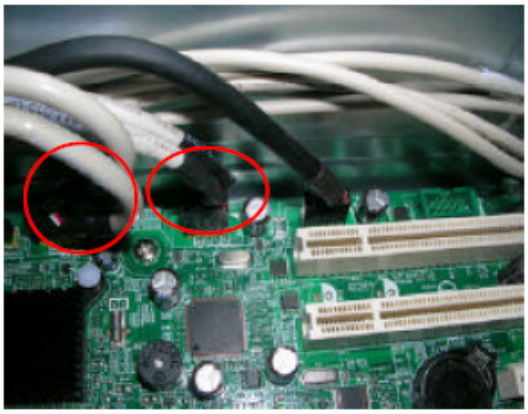
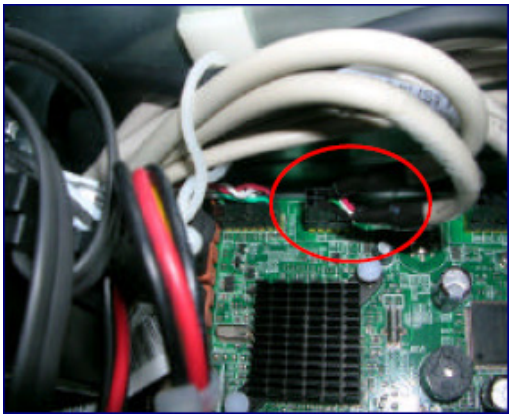
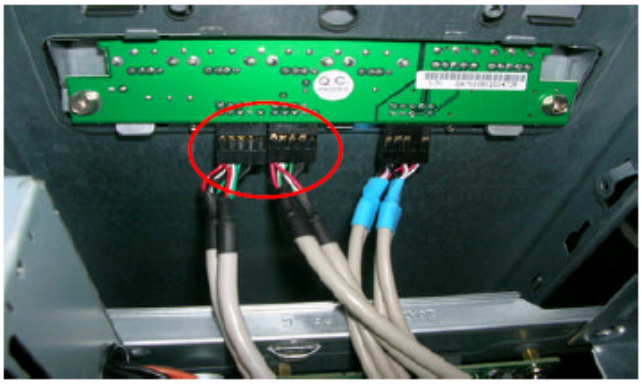
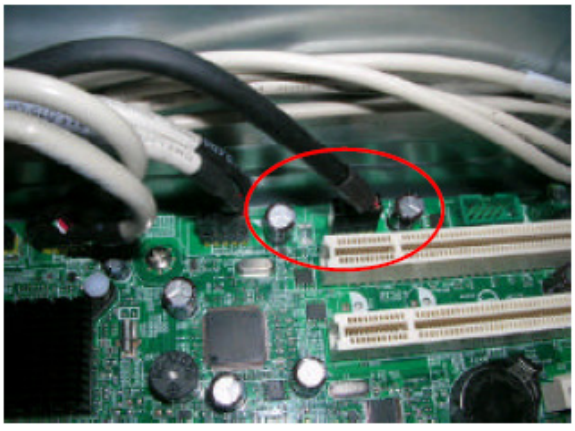
5. Disconnect the audio cable.



6. Disconnect the USB cables.

7. Disconnect the card read cable.



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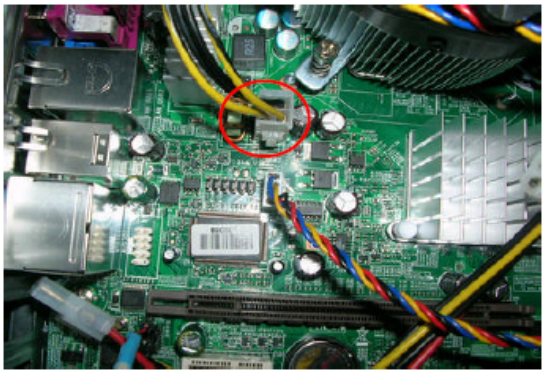
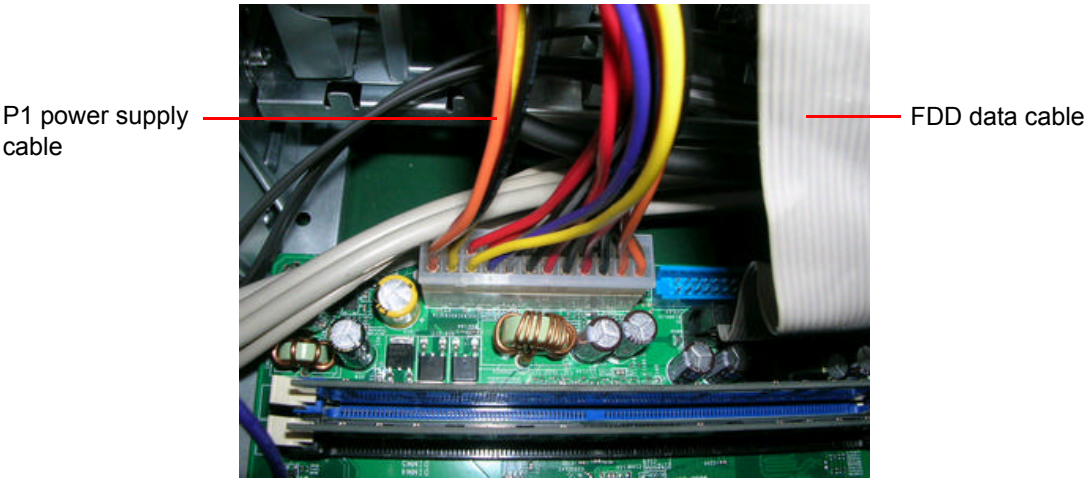
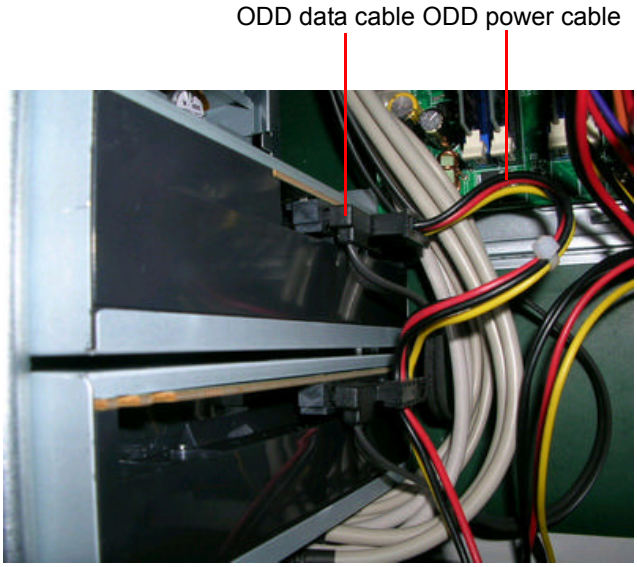
8. Disconnect the PA and PD power cable from the MB connector.



9. Disconnect the P1 power supply cable and FDD data cable.



10. Disconnect the ODD power cable and the ODD data cable.



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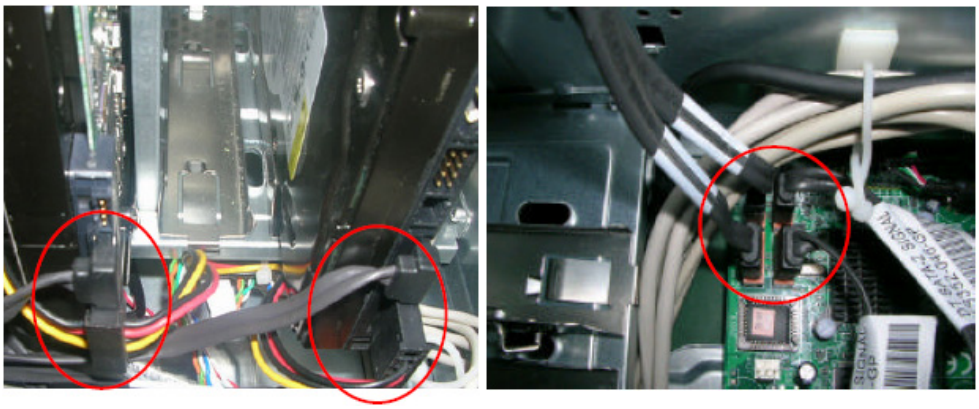
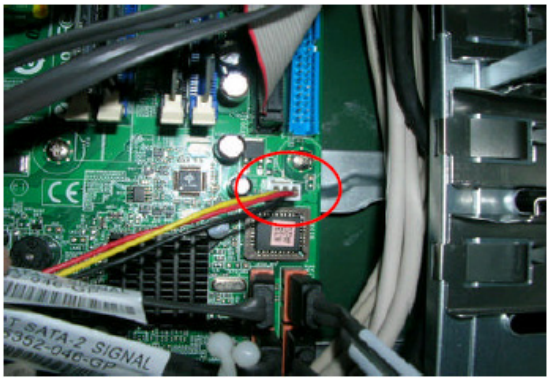
11. Disconnect the HDD power cable and the HDD data cable.



12. Disconnect the System Fan power cable from the MB connector.



Note: When reassembling the System Fan, the Fan cable should be fixed in the clip together with the CPU+12V cable.

13. Slide the HDD holder as shown and remove the HDD from the chassis.

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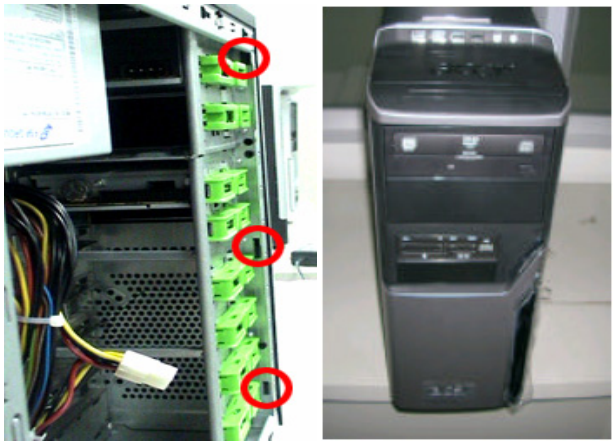
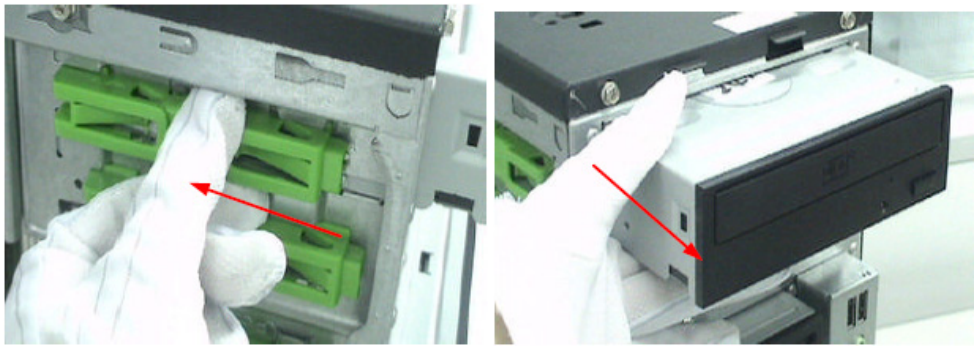
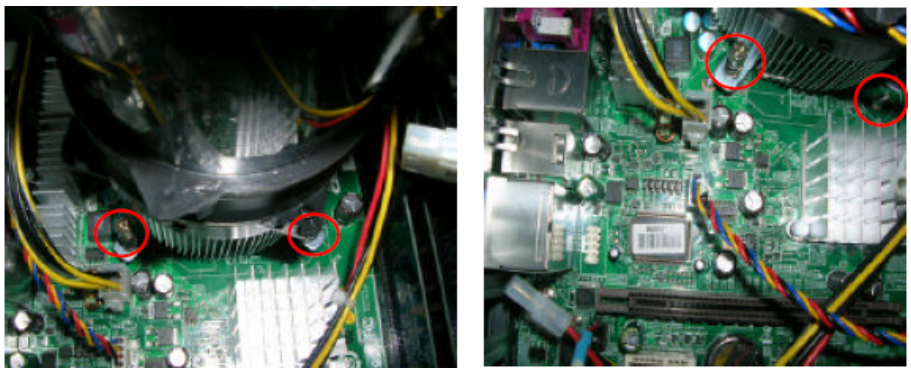
14. Release the three latches as shown and remove the front bezel.



15. Slide the ODD holder as shown and remove the ODD from the chassis.



16. Release the 4 screws from the CPU cooler and remove from the main board.



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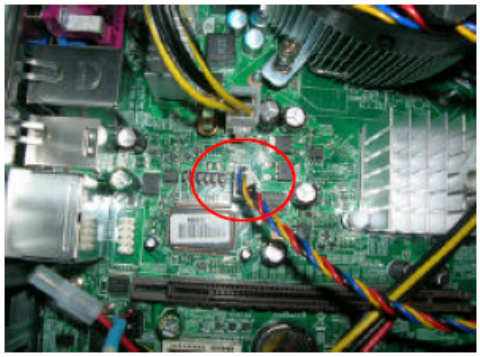
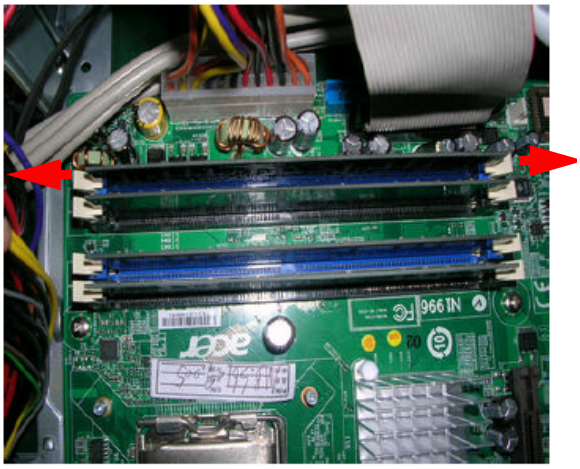
17. Disconnect the CPU Cooler power cable from the MB.



18. Push the two locking latches away from the memory unit at the same time to release the memory. Repeat as necessary to remove all memory.



19. Release the four screws fastening the system fan and remove from the chassis.

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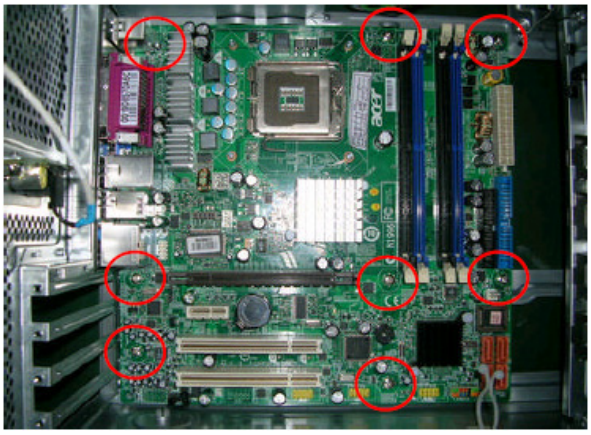
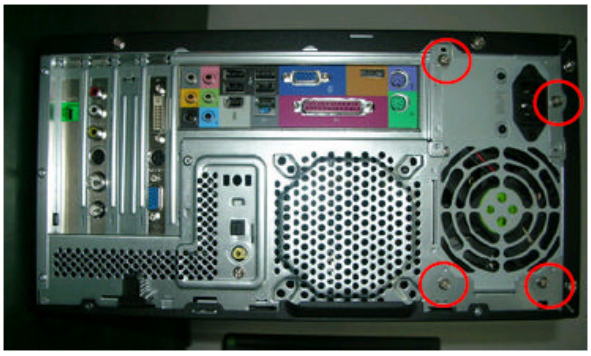
20. Push and release the CPU latch and remove the CPU from the motherboard.

21. Release the 8 screws marked below and remove the main board.



22. Release the four screws marked below and remove the system power supply from the chassis.



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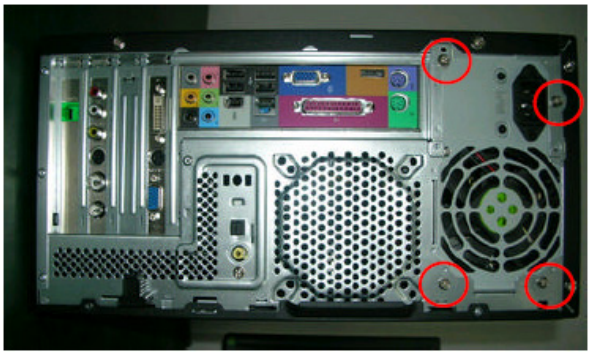
AM3610 Reassembly Procedure

1. Insert the system power supply in to the chassis and secure the four screws marked below.

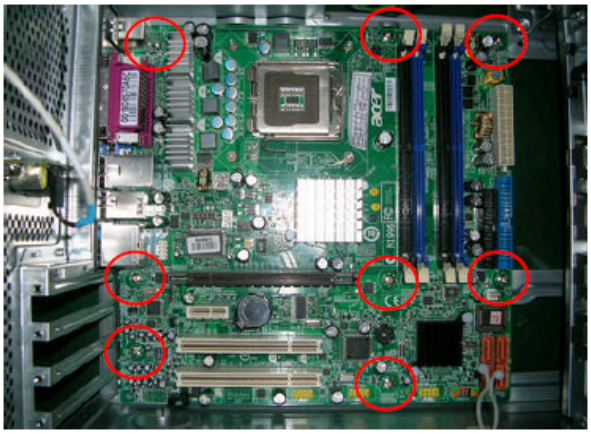


IMPORTANT:FSP and LITEON power supply cabling differ due to size constraints. For FSP power supplies, use a power cable clip to secure the 12V cable. For LITEON power supplies, use a non-cable clip to secure the 12V cable.

FSP Power Supply

LITEON Power Supply

2. Insert the main board and secure the 8 screws marked below.



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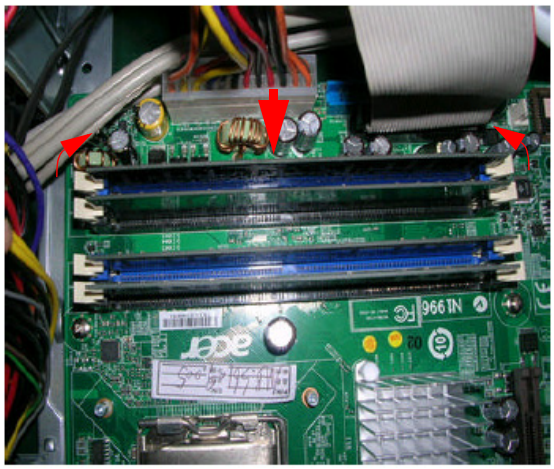
3. Insert the CPU in to the motherboard. Close the CPU latch.

4. Insert the System Fan in to the chassis as secure the 4 screws as shown.

5. Insert the memory into the slot, taking care to allign the locating lug. Push down as shown until the securing latches click into place. Repeat for all memory modules.



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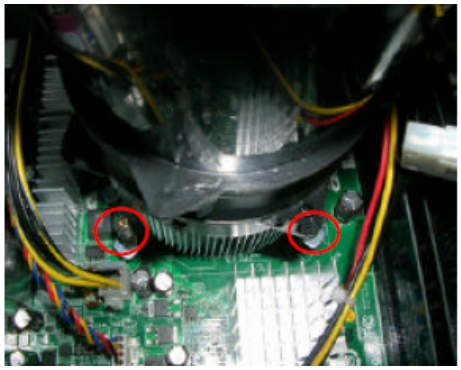
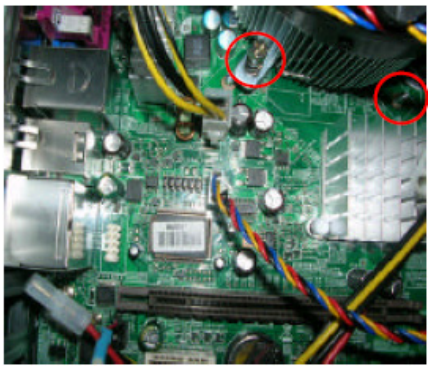
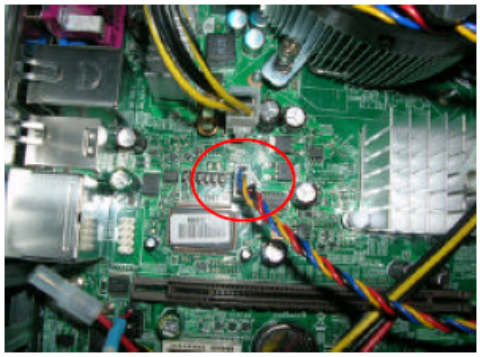
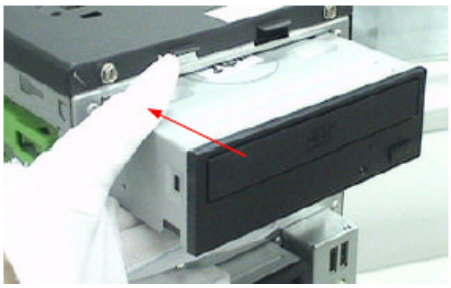
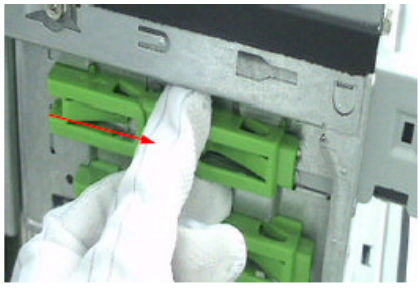
6. Insert the CPU Cooler in to the mainboard and secure the 4 screws as shown.

7. Connect the CPU Cooler power cable to the MB.



8. Insert the ODD in to the chassis and slide the ODD holder as shown to lock it in place.

9. Insert the FDD in to the chassis and slide the FDD holder as shown to lock it in place.

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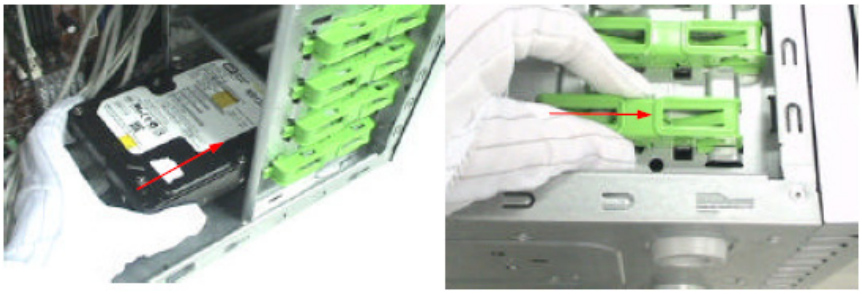
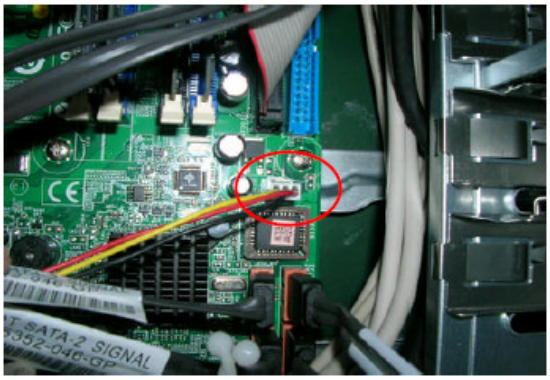
10. Attach the front bezel as shown. Ensure that access to the USB ports is not restricted.

11. Insert the SPDIF into the chassis. Ensure that the unit locates correctly as shown.

12. Insert the HDD in to the chassis and slide the HDD holder as shown to lock it in place.



13. Connect the System Fan power cable in to the MB connector.



Note: When reassembling the System Fan, the Fan cable should be fixed in the clip together with the CPU+12V cable.

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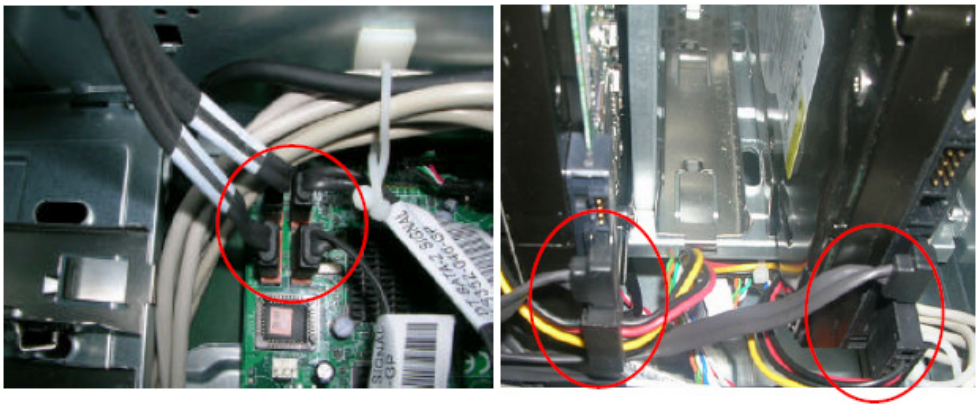
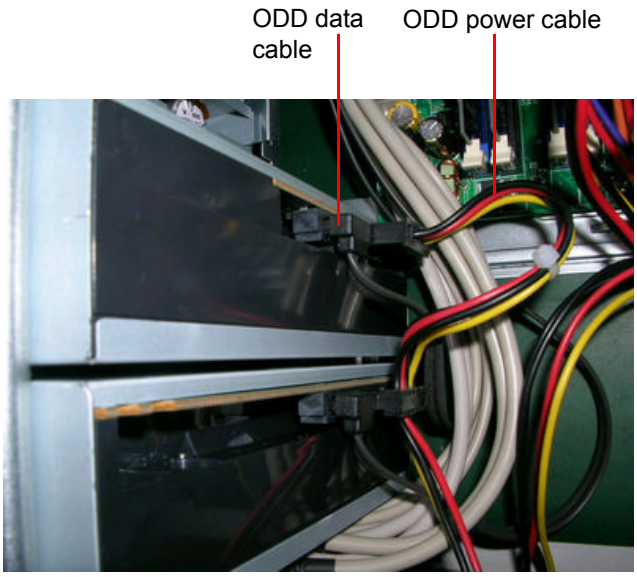
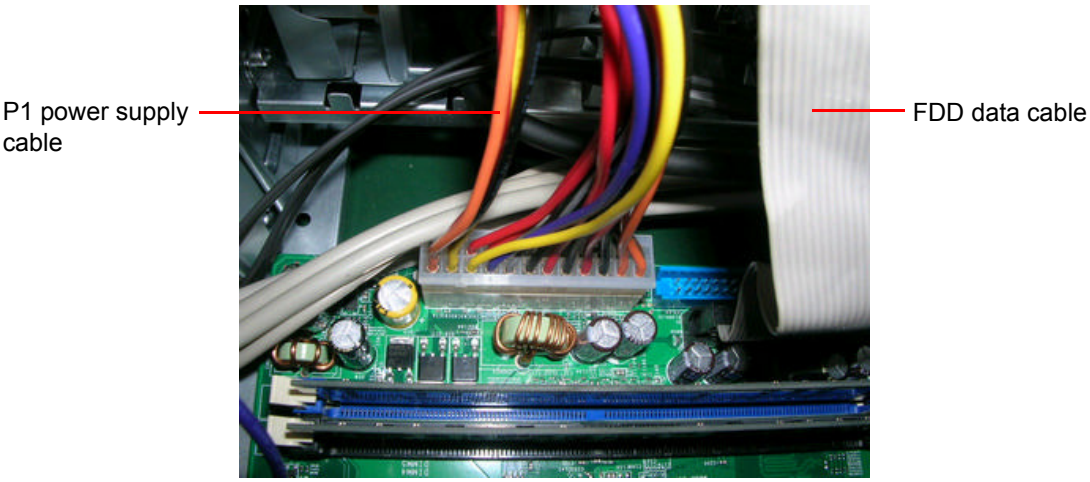
14. Connect the the HDD data cable and HDD power cable.



15. Connect the ODD data cable and the ODD power cable.



16. Connect the FDD data cable and P1 power supply cable.



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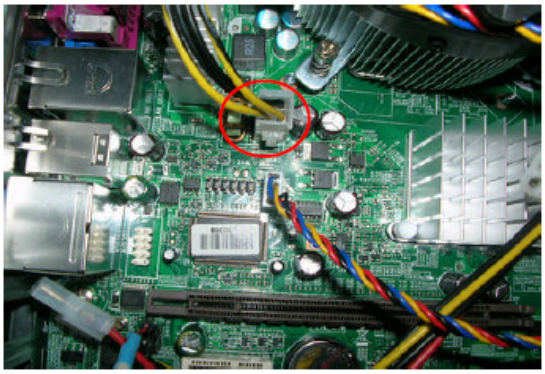
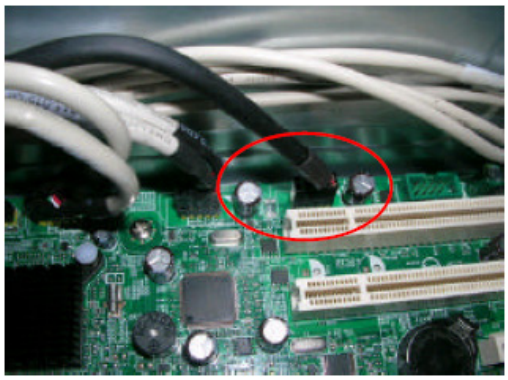
17. Connect the PA and PD power cable to the MB connector.



18. Connect the card read cable.



Note: When reassembling the Card Reader SKUs, the front I/O only supports 2 USB ports. The USB cable from the DB is connected to USB Port1 on the MB and the Card Reader USB cable is connected to USB Port2. See the table below for your reference:

SKU Status	USB Port1	USB Port2	USB Port3
W/I Card Reader	USB cable1	CR USB cable	USB cable2
W/O Card Reader	USB cable1	USB cable2	N/A

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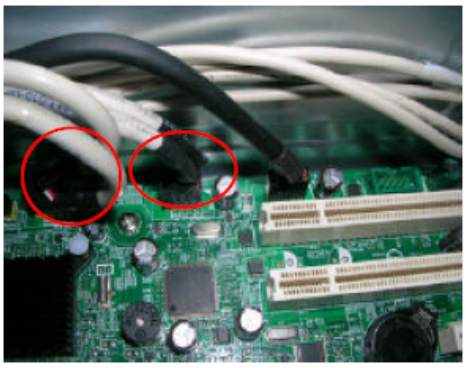
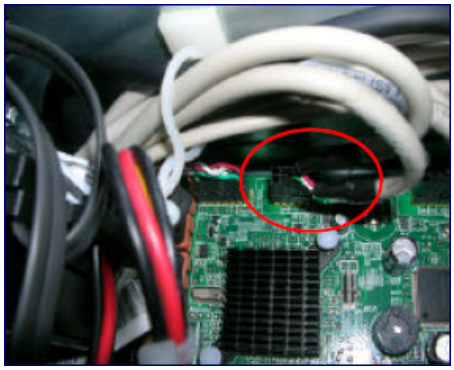
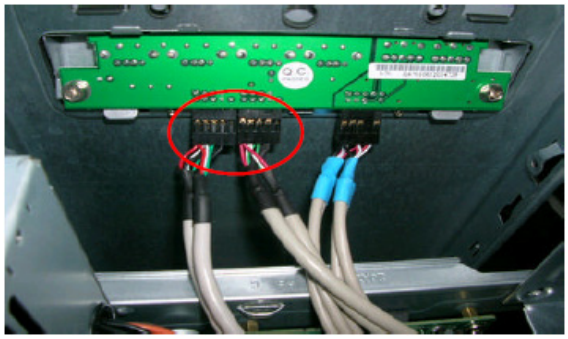
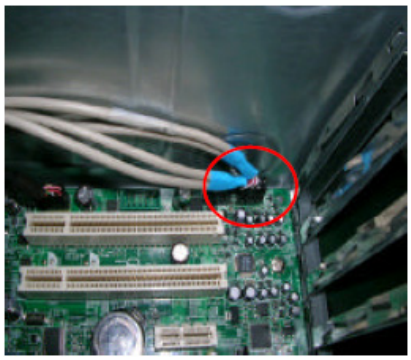
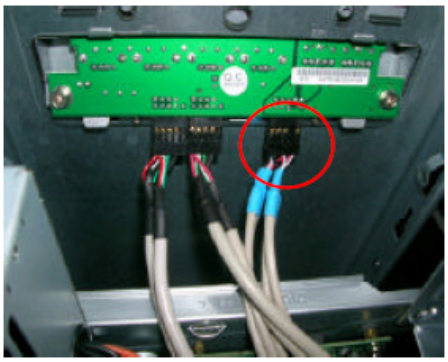
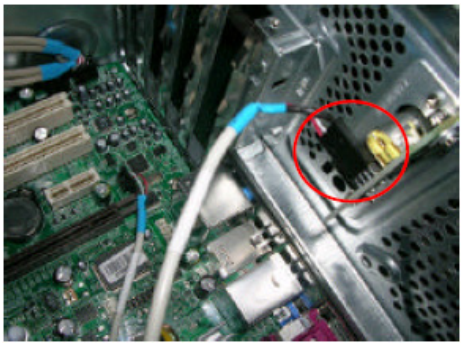
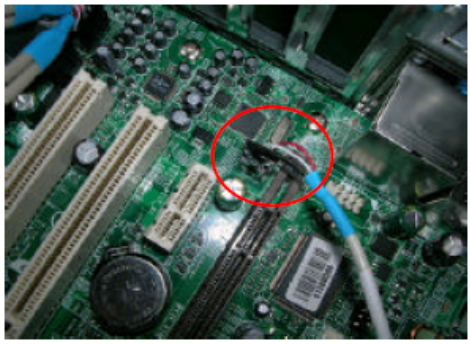
19. Connect the USB cables.

20. Connect the audio cable.

21. Connect the SPDIF cable.

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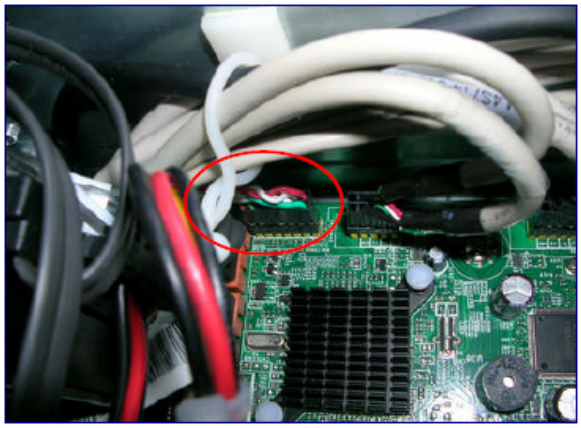
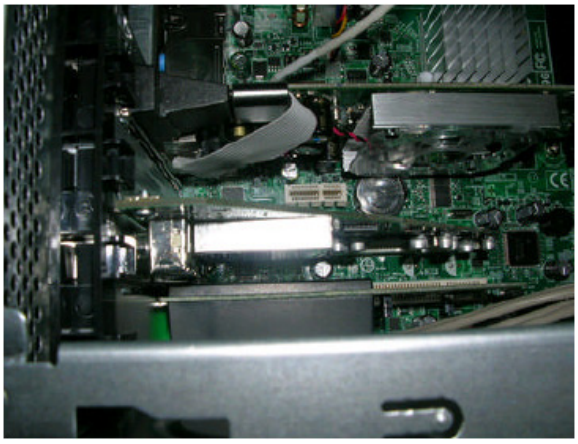
22. Connect the front bezel LED cable.



23. Connect the VGA/TV, and Modem cards.



24. Slide the left cover in and secure the lock handle.

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Troubleshooting

Please refer to generic troubleshooting guide in the service guide database for information with respect to following items:

- Power-On Self-Test (POST)
- POST Check Points
- POST Error Messages List
- Error Symptoms List

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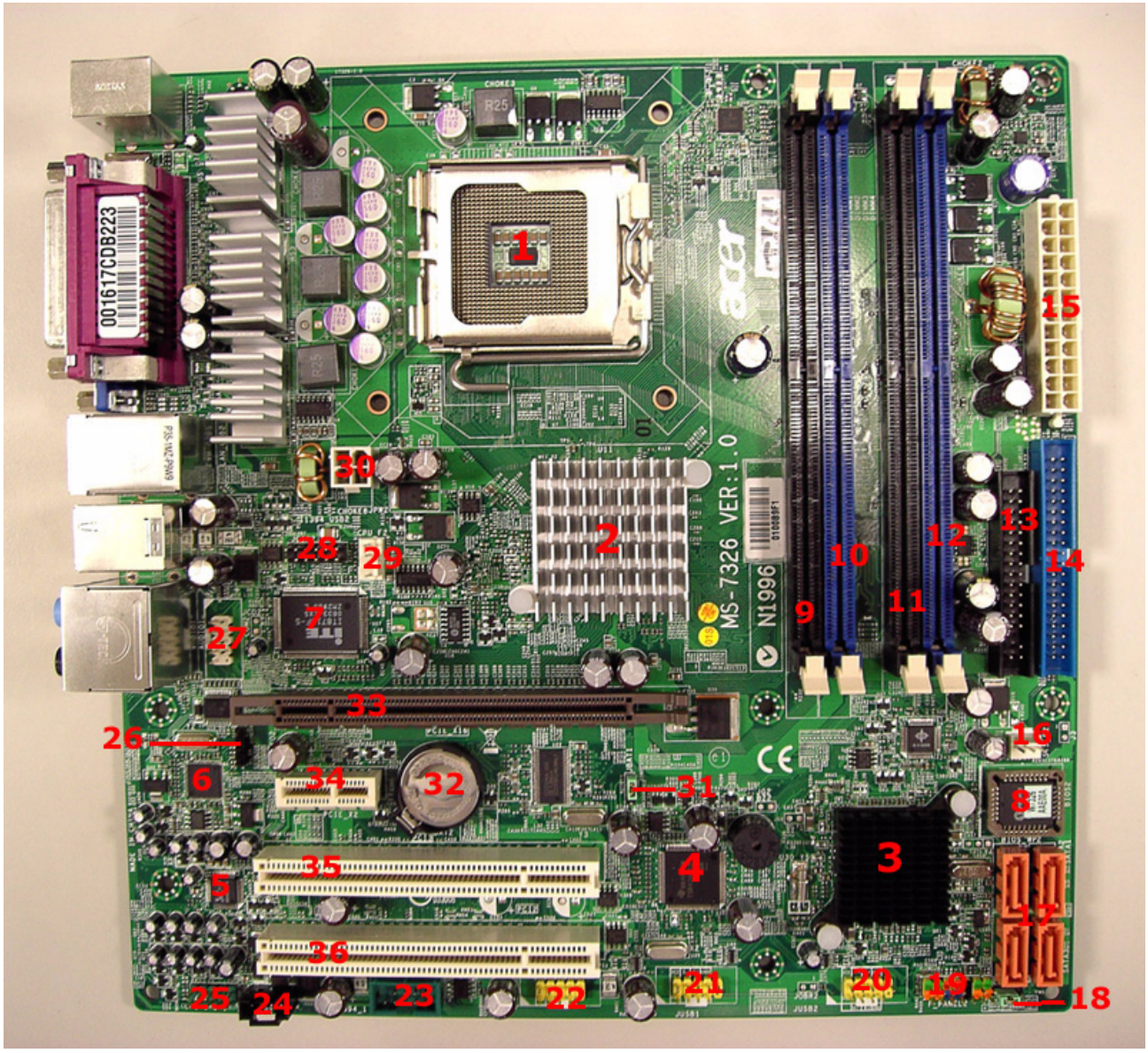
Jumper and Connector Information

Introduction of Connectors

Main Board Placement



#	Component	#	Component
1	LGA775 socket for Intel Pentium D/ Pentium 4/ Celeron D/ Core 2 Extreme/ Quad Core / Core 2 Duo CPUs	2	North bridge ATI RS600
3	South bridge ATI SB600	4	IEEE 1394 chip TI TSB43AB23

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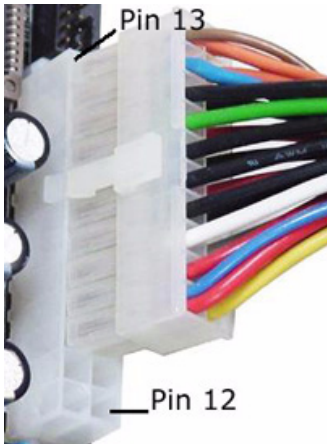
5	Audio chip Realtek ALC888	6	LAN chip Marvell 88E8056
7	I/O chip ITE IT8718F	8	BIOS chip
9~12	Memory slots DIMM1~DIMM4	13	Floppy disk drive connector FDD1
14	Hard disk drive connector IDE1	15	ATX 24-pin power connector ATX1
16	Fan power connector SYS_F2	17	Four SATA connectors SATA1~SATA4
18	BIOS write protect jumper BIOS_WP3	19	Front panel connectors F_PANEL2
20~22	Front USB connectors JUSB1, JUSB2 and JUSB3	23	IEEE 1394 connector J1394_1
24	CD-In connector JCD2	25	Front panel audio connector JAUD2
26	SPDIF-Out connector JSPDIFO2	27	Serial port header COM2
28	IrDA Infrared module header JCIR2	29	Fan power connector CPU_F2
30	ATX 12V power connector JPW2	31	Clear CMOS jumper JBAT1
32	Battery BATT	33	PCI Express x16 slot PCIE_X16
34	PCI Express x1 slot PCIE_X1	35~36	PCI Express slot PCI3, PCI2

Power Supply

ATX 24-Pin Power Connector



This connector allows you to connect an ATX 24-pin power supply.To connect the ATX 24-pin power supply, make sure the plug of the power supply is inserted in the proper orientation and the pins are aligned. Then push down the power supply firmly into the connector.

You may use the 20-pin ATX power supply as you like. If you'd like to use the 20-pin ATX power supply, please plug your power supply along with pin 1 and pin 13 as shown. There is also a foolproof design on pin 11, 12, 23 and 24 to avoid wrong installation.

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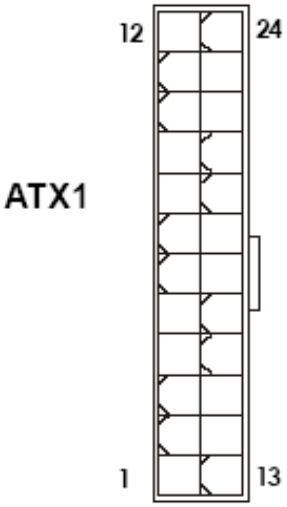
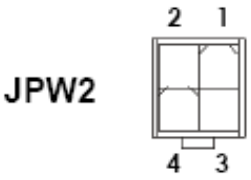


PIN	Signal	Pin	Signal
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS-ON#
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	PWROK	20	Res
9	5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND

ATX 12V Power Connector: JPW2

This 12V power connector JPW2 is used to provide power to the CPU.



PIN	Signal
1	GND
2	GND
3	12V
4	12V

Important! Make sure that all the connectors are connected to proper ATX power supplies to ensure stable operation of the main board. Power supply of 350W (and above) is highly recommended for system stability.

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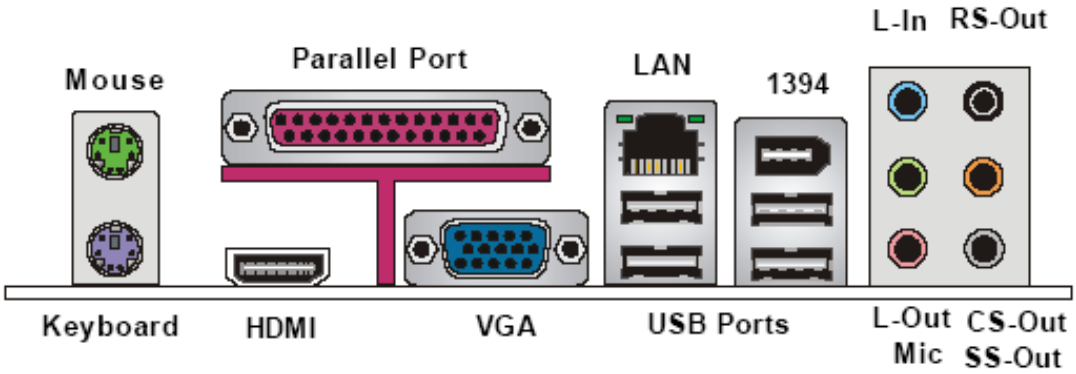
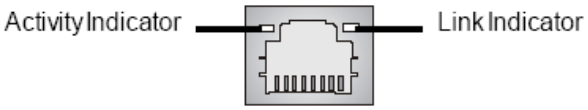
Back Panel



- Mouse/Keyboard connector: The standard PS/2 mouse/keyboard DIN connector is for a PS/2 mouse/ keyboard.
- Parallel port connector: A parallel port is a standard printer port that supports Enhanced Parallel Port (EPP) and Extended Capabilities Parallel Port (ECP) mode.
- HDMI port connector: The High-Definition Multimedia Interface (HDMI) is an all-digital audio/video interface capable of transmitting uncompressed streams. HDMI supports all TV format, including standard, enhanced, or high-definition video, plus multi-channel digital audio on a single cable.
- VGA connector: The DB 15-pin female connector is provided for VGA monitors.
- IEEE 1394 port: The 1394 port on the back panel provides connection to 1394 devices.
- LAN (RJ-45) jack: The standard RJ-45 jack is for connection to single Local Area Network (LAN). You can connect a network cable to it.



LED	Color	LED State	Condition
Left	Orange	Off	LAN link is not established
		On (steady state)	LAN link is established
		On (brighter and pulsing)	The computer is communicating with another computer on the LAN
Right	Green	Off	10 Mbit/sec data rate is selected
		On	100 Mbit/sec data rate is selected
	Orange	On	1000 Mbit/sec data rate is selected

- USB connectors: The OCHI (Open Host Controller Interface) Universal Serial Bus root is for attaching USB devices such as keyboard, mouse, or other USB-compatible devices.
- Audio port connectors: These audio connectors are used for audio devices. You can differentiate the color of the audio jacks for different audio sound effects.
  - Green audio jack: Line Out, is a connector for speakers or headphones.
  - Blue audio jack: Line In, is used for external CD player, tape player or other audio devices.
  - Pink audio jack: Mic In, is a connector for microphones.
  - Orange audio jack: Center/ Sub woofer Out in 5.1/ 7.1 channel mode.
  - Black audio jack: Rear-Surround Out in 4/ 5.1/ 7.1 channel mode.
  - Gray audio jack: Side-Surround Out in 7.1 channel mode.

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Connectors

Floppy Disk Drive Connector: FDD1

This standard FDD connector supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types.

ATA133 Hard Disk Connector: IDE1

FDD1

The main board has a 32-bit Enhanced PCI IDE and Ultra DMA 66/ 100/ 133 controller that provides PIO mode 0~4, Bus Master, and Ultra DMA 66/ 100/ 133 function. You can connect hard disk drives, CD-ROM and other IDE devices.

The Ultra ATA133 interface boosts data transfer rates between the computer and the hard drive up to 133MB per second. The new interface is one-third faster than earlier record-breaking Ultra ATA100 technology and is backward compatible with the existing Ultra ATA interface.

IDE1

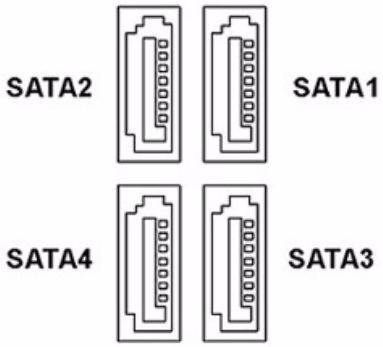
IDE1 (Primary IDE Connector)

IDE1 can connect a Master and a Slave drive. You must configure the second hard drive to Slave mode by setting the jumper accordingly.

Important! If you install two hard disks on IDE cable, you must configure the second drive to Slave mode by setting its jumper.

Serial ATA Connectors: SATA1~SATA4

SATA1~SATA4 are high-speed SATAII interfaces ports. Each supports data rates of 300MB/s and is fully compliant with Serial ATA specifications. Each Serial ATA connector can connect to one hard disk device.



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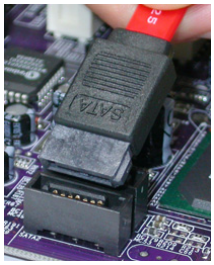
SATA cable

SATA connector



SATA power cable

SATA device

Important! Please do not fold the Serial ATA cable into 90-degree angle. Otherwise, data loss may occur during transmission.

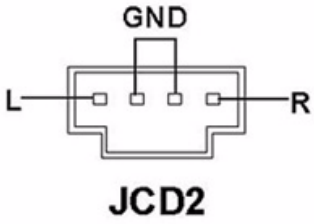
Fan Power Connectors: CPU_F2, SYS_F2

The fan power connectors support system cooling fan with +12V. When you connecting the wire to the connectors, always take note that the red wire is the positive and should be connected to the +12V, the black wire is ground and should be connected to GND. If the main board has a system hardware monitor chipset onboard, you must use a specially designed fan with speed sensor to take advantage of the CPU fan control.

Important! Fan/heatsink with 3 or 4 pins are both available for CPU_F2. CPU_F2 supports fan control.

CD-In Connector: JCD2

This connector is provided for CD-ROM audio.



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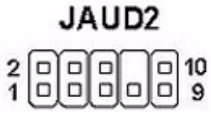
Front Panel Audio Connector: JAUD2

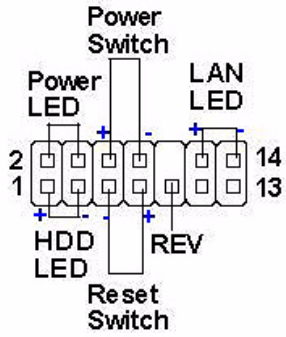
The JUAD2 front panel audio connector allows you to connect the front panel audio and is compatible with Intel Front Panel I/O Connectivity Design Guide.



PIN	Signal	Description
1	MIC_L	Microphone - Left channel
2	GND	Ground
3	MIC_R	Microphone - Right channel
4	PRESENCE#	Active low signal - signals BIOS that a High Definition Audio dongle is connected to the analog header. PRESENCE# = 0 when a High Definition Audio dongle is connected
5	LINEout_R	Analog Port - Right channel
6	MIC_JD	Jack detection return from the front panel microphone JACK1
7	Front_JD	Jack detection sense line from the High Definition Audio CODEC jack detection resistor network
8	NC	No Control
9	LINEout_L	Analog Port - Left channel
10	LINEout_JD	Jack detection return from front panel JACK2

Front Panel Connectors: F_PANEL2

The main board provides one front panel connector for electrical connection to the front panel switches and LEDs.



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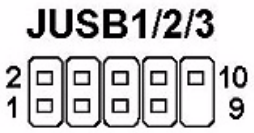
Front USB Connectors: JUSB1, JUSB2 & JUSB3

The main board provides USB 2.0 pin headers that are compatible with Intel I/O Connectivity Design Guide. USB 2.0 technology increases data transfer rate up to a maximum 480Mbps, which is 40 times faster than USB 1.1, and is ideal for connecting high-speed USB interface peripherals such as USB HDD, digital cameras, MP3 players, printers, modems and so on.



PIN	Signal	PIN	Signal
1	VCC	2	VCC
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	GND	8	GND
9	Key (no pin)	10	USBOC

Important! The pins of VCC and GND must be connected correctly to avoid possible damage.

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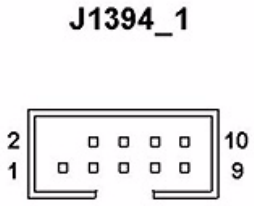
IEEE 1394 Connectors: J1394_1

The main board is equipped with IEEE 1394 pin header that allows you to connect IEEE 1394 ports.



PIN	Signal	PIN	Signal
1	TPA+	2	TPA-
3	Ground	4	Ground
5	TPB+	6	TPB-
7	Cable Power	8	Cable Power
9	Key (no pin)	10	Ground

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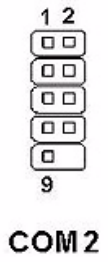
Serial Port Header: COM2

The main board offers one 9-pin header as serial port. The port is a 16550A high speed communication port that sends/receives 16 bytes FIFOs. You can attach a serial mouse or other serial device directly to it.



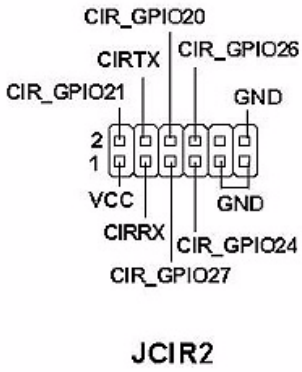
PIN	Signal	Description
1	DCD	Data Carry Detect
2	SIN	Serial In or Receive Data
3	SOUT	Serial Out or Transmit Data
4	DTR	Data Terminal Ready)
5	GND	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear TO Send
9	RI	Ring Indicate

SPDIF-Out Connector: JSPDIFO2

This connector is used to connect SPDIF (Sony & Philips Digital Interconnect Format) interface for digital audio transmission.

IrDA Infrared Module Header: JCIR2

This connector allows you to connect to MCE Infrared receiver & IR blaster module.



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Cable Lengths

Cable	AM30 Bezel Length/ H.H P/N	AM50 Bezel Length/ H.H P/N	Remark
Front Panel Cable	310/305/300mm 351003F00-GY0-G	310/305/300mm 351003F00-GY0-G	Standard
ODD Cable	350(275+75) 4N614-002-GP	350(275+75) 4N614-002-GP	Standard
Serial ATA Data Cable 1	320mm 4S352-032-GP	320mm 4S352-032-GP	Standard
Serial ATA Data Cable 2	320mm 4S352-032-GP	320mm 4S352-032-GP	Optional
Serial ATA Data Cable for ODD	450mm 4S352-046-GP	450mm 4S352-046-GP	Optional
Serial ATA Power Cable	100/50mm 4S352-047-GP	100/50mm 4S352-047-GP	Optional
USB Cable1	610mm 350601G00-600-G	610mm 350601G00-600-G	Standard
USB Cable2	610mm 350601G00-600-G	610mm 350601G00-600-G	Standard
Audio Cable	720mm 351003900-600-G	720mm 351003900-600-G	Standard
FDD Cable	220mm 4S320-001-GP	220mm 4S320-001-GP	Standard
Aspire Logo LED Cable	520mm+/-10mm 351003E00-GY0-G	520mm+/-10mm 351003E00-GY0-G	Standard
SPDIF	N/A	280mm 4S702-009-GP	Standard

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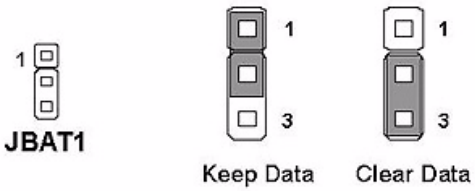
Jumpers

Clear CMOS Jumper: JBAT1

There is a CMOS RAM onboard that has a power supply from external battery to keep the data of system configuration. With the CMOS RAM, the system can automatically boot OS every time it is turned. If you want to clear the system configuration, set the JBAT1 (Clear CMOS Jumper) to clear data.



Important! You can clear CMOS by shorting 2-3 pin while the system is off. Then return to 1-2 pin position. Avoid clearing the CMOS while the system is on, or it will damage the main board.

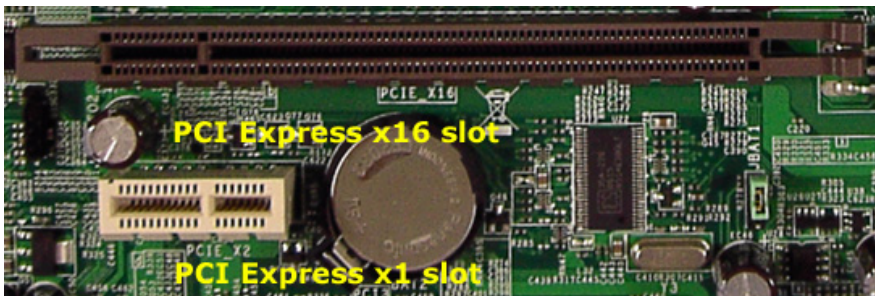
BIOS Write Protect Jumper: BIOS_WP3

A **boot block** program is included as part of the system BIOS to recover the system from a situation when the BIOS code is incorrect/corrupted or needs to be updated. When the BIOS code is corrupted or needs to be updated, you have to at first disable the write protect function by shorting 1-2 pin of the BIOS_WP3 jumper. Then the boot block will try to recover the BIOS code, usually by reading it from a specially-prepared floppy disk. Under normal operation, we suggest that you enable the write protect function by shorting 2-3 pin of the BIOS_WP3 jumper to protect the boot block from virus infection.

Slots

PCI (Peripheral Component Interconnect) Express Slots

PCI Express architecture provides a high performance I/O infrastructure for Desktop Platforms with transfer rates starting at 2.5 Giga transfers per second over a PCI Express x1 lane for Gigabit Ethernet, TV Tuners, 1394 controllers, and general purpose I/O. Also, desktop platforms with PCI Express Architecture will be designed to deliver highest performance in video, graphics, multimedia and other sophisticated applications. Moreover, PCI Express architecture provides a high performance graphics infrastructure for Desktop Platforms doubling the capability of existing AGP 8x designs with transfer rates of 4.0 GB/s over a PCI Express x16 lane for graphics controllers, while PCI Express x1 supports transfer rate of 250 MB/s.



Important! When adding or removing expansion cards, make sure that you unplug the power supply first.

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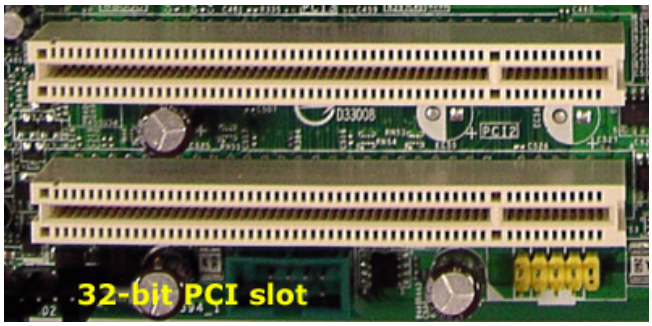
PCI (Peripheral Component Interconnect) Slots

The PCI slots support LAN cards, SCSI cards, USB cards, and other add-on cards that comply with PCI specifications. At 32 bits and 33 MHz, it yields a throughput rate of 133 MBps.



PCI Interrupt Request Routing

The IRQ, acronym of interrupt request line and pronounced I-R-Q, are hardware lines over which devices can send interrupt signals to the microprocessor. The PCI IRQ pins are typically connected to the PCI bus pins as follows:

PCI Slot	Order 1	Order 2	Order 3	Order 4
Slot 1	INT A#	INT B#	INT C#	INT D#
Slot 2	INT B#	INT C#	INT D#	INT A#

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FRU (Field Replaceable Unit) List

This chapter offers the FRU (Field Replaceable Unit) list in global configuration of Aspire AM5610 and AM3610 desktop. Refer to this chapter whenever ordering the parts to repair or for RMA (Return Merchandise Authorization).

Please note that when ordering FRU parts, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number is changed, it will NOT be noted on the printed service guide. For Acer authorized service providers, your Acer office may have a different part number code from those given in the FRU list of this printed service guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for service.

> **Note:** To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose them properly, or follow the rules set by your regional Acer office on how to return it.

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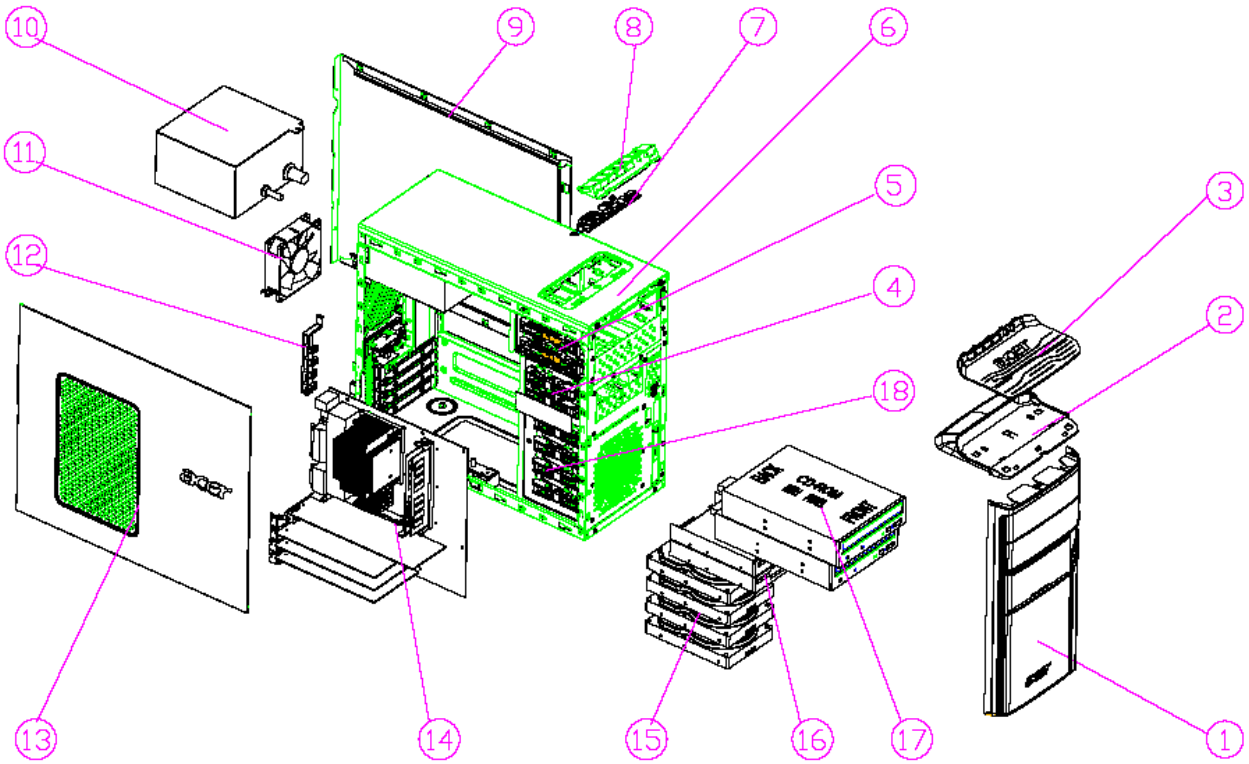
AM5610 Exploded Diagram



Number	Description	Number	Description
1	AM30 Bezel	10	Power Supply
2	AM50 USB	11	Fan
3	AM50 USB Panel	12	PCI Bracket
4	FDD Lock Slide	13	Left Slide Door
5	CD ROM Lock Slide	14	Motherboard
6	Chassis	15	HDD
7	USB PCB ASM	16	3.5” Device
8	USB Shielding	17	CD ROM
9	Right Slide Door	18	HDD Lock Slide

Aspire AM5610 Parts Lists

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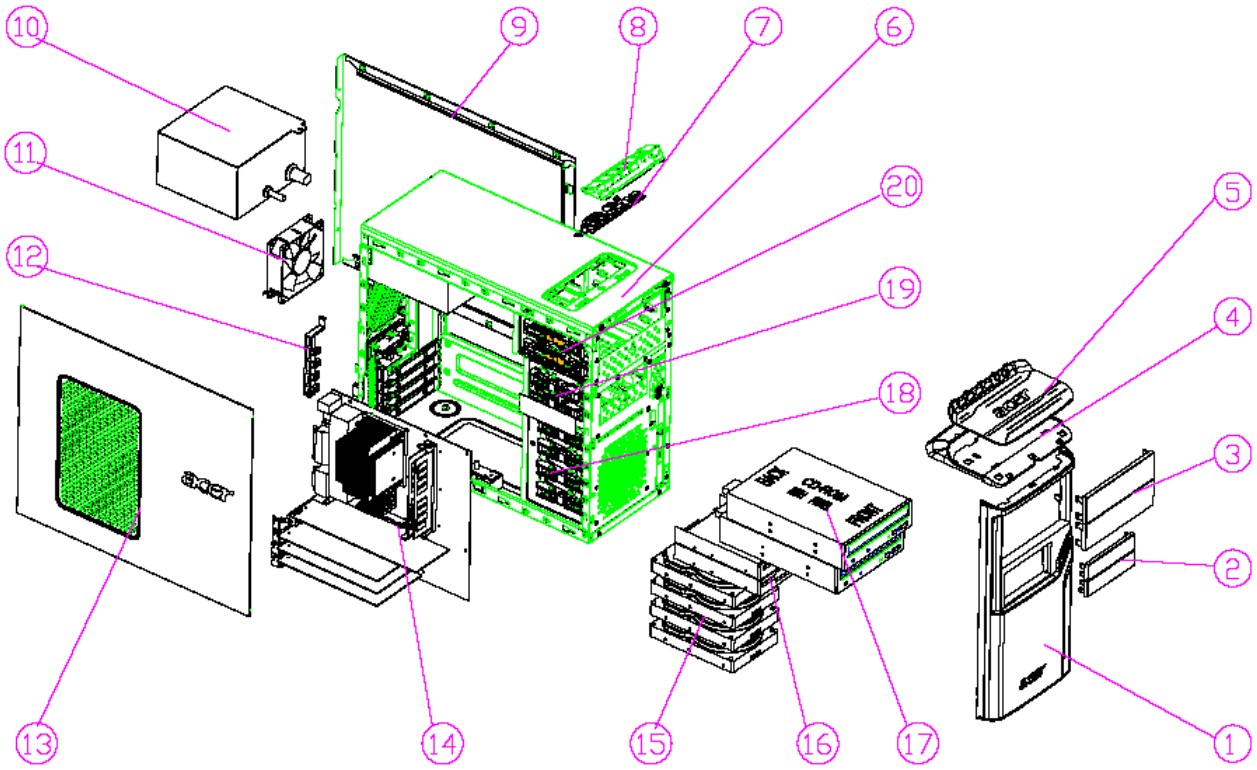
AM3610 Exploded Diagram



Number	Description	Number	Description
1	AM30 Main Bezel	11	Fan
2	3_25 Cover	12	PCI Bracket
3	5_25 Cover	13	Left Side Door
4	AM50 USB	14	Motherboard
5	AM50 USB Panel	15	HDD
6	Chassis	16	3.5” Device
7	USB PCB ASM	17	CD ROM
8	USB Shielding	18	HDD Lock Slide
9	Right Side Door	19	FDD Lock Slide
10	Power Supply	20	CD ROM Lock Slide

Aspire AM3610 Parts Lists

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